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**A COMPILATION OF
STATIC STABILITY AND FIN LOADS DATA
FOR SLENDER BODY MISSILE MODELS
WITH AND WITHOUT TAIL FINS AND WINGS**

VOLUME I

**PROPULSION WIND TUNNEL FACILITY
ARNOLD ENGINEERING DEVELOPMENT CENTER
AIR FORCE SYSTEMS COMMAND
ARNOLD AIR FORCE STATION, TENNESSEE 37389**

March 1976

Final Report for Period March 1968 — March 1973

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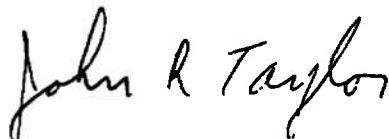
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This technical report has been reviewed and is approved for publication.

FOR THE COMMANDER



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from 0.20 to 4.63 over an angle-of-attack range from -6 to 60 deg and a sideslip angle range from -20 to 20 deg for the body-alone configurations, body-wing configurations, and the body-wing-tail fin configurations. In addition, the tail fin configurations were tested using the reflection plane technique, and the resulting fin loads data are presented for a Mach number range of 0.80 to 2.16 over an angle-of-attack range from 0 to 210 deg. Volume I contains the narrative and selected plotted data.

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PREFACE

The data presented herein were compiled by the Arnold Engineering Development Center (AEDC), Air Force Systems Command (AFSC), under the sponsorship of the Air Force Armament Laboratory (AFATL), Eglin Air Force Base, Florida. Seven different tests were conducted by three organizations: ARO, Inc. (a subsidiary of Sverdrup & Parcel and Associates, Inc.), contract operator of the AEDC, AFSC, Arnold Air Force Station, Tennessee; Naval Ship Research and Development Center (NSRDC), Bethesda, Maryland; and Langley Research Center (LRC), National Aeronautics and Space Administration (NASA), Langley Air Force Base, Virginia. The data were compiled under ARO Project No. P34A-37A. The author of this report was G. R. Gomillion, ARO, Inc. The manuscript (ARO Control No. ARO-PWT-TR-75-88) was submitted for publication on June 20, 1975.

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G. TEST NUMBER 7 TABULATED DATA Volume IV & V

1.0 INTRODUCTION

In order to give wider dissemination to the aerodynamic data obtained for the Martin Generalized Research Model at the Arnold Engineering Development Center (AEDC), Aerodynamic Wind Tunnel (4T); the NASA Langley Research Center (LRC), Unitary Plan Wind Tunnel (UPWT); and the Naval Ship Research and Development Center (NSRDC), 7 x 10 Foot Transonic Wind Tunnel (7 x 10), for seven tests during the period March 1968 through March 1973; the Air Force Armament Laboratory (AFATL), Eglin Air Force Base, Florida, requested that AEDC collect, correlate, and publish the data in a consistent format. The basic purpose of this report is to document and catalog all of the valid data obtained on the research model during these tests. For the seven tests, the test facilities and dates are as follows:

<u>Test Number</u>	<u>Facility</u>	<u>Date</u>
1	AEDC-4T	December 1970
2	AEDC-4T	May 1972
3	LRC-UPWT	March 1968
4	LRC-UPWT	April 1970
5	LRC-UPWT	July 1971
6	NSRDC-7X10	October 1968
7	NSRDC-7X10	March 1973

The purpose for testing the Martin Generalized Research Model was to provide data to improve missile aerodynamic methodology and fin design capability. In pursuing the purpose of the testing, the effects of body shape, wing size, wing location, and tail fin planform were investigated. In addition, tail fin loads were measured for various fin deflections with the fins mounted on missile configurations and on a reflection plane. Other studies on the research model included the effects of Reynolds number and of fixing transition. The results of several of the investigations are discussed in Ref. 1 (Test No. 1), Ref. 2 (Test No. 2), Ref. 3 (Test No. 6), and Ref. 4 (Test No. 1), and in addition some of the data presented in this report were included in Ref. 5.

The compiled data in this report are documented with a large portion of the data in plotted form and all the data in tabulated form. Additionally, it should be noted that not all the data obtained on the research model for the seven tests between March 1968 and March 1973 are presented. The data not presented were, for various reasons, believed to be invalid.

Static stability and fin loads data are presented for a Mach number range from 0.20 to 4.63 over an angle-of-attack range from -6 to 60 deg and a sideslip angle range from

-20 to 20 deg for body, body-wing, body-tail, and body-wing-tail configurations. Additional tail fin loads data from the reflection-plane tests are presented for a Mach number range from 0.80 to 2.16 and an angle-of-attack range from 0 to 210 deg.

2.0 APPARATUS

2.1 TEST FACILITIES

2.1.1 Arnold Engineering Development Center (AEDC), Aerodynamic Wind Tunnel (4T)

The AEDC-4T tunnel is a closed-loop, continuous flow, variable-density tunnel in which the Mach number can be varied from 0.1 to 1.3. Also, nozzle blocks can be installed to give nominal Mach numbers of 1.6 and 2.0. At all Mach numbers, the stagnation pressure can be varied from 2 to 26 psia. The test section is 4 ft square and 12.5 ft long with perforated, variable porosity (0.5- to 10-percent open) walls. It is completely enclosed in a plenum chamber from which the air can be evacuated, allowing part of the tunnel airflow to be removed through the perforated walls of the test section.

The model support system consists of a pitch sector, boom, and sting which provide a pitch capability from -11 to 28 deg with respect to the tunnel centerline. The center of rotation is at station 108. In addition, a remote-controlled roll mechanism allows roll angle variations of ± 180 deg. A schematic of the test section showing the location of the test model for test No. 1 is shown in Fig. 1. Photographs of the model installation for tests No. 1 and 2 are shown in Fig. 2. A more thorough description of the tunnel may be found in Ref. 6.

2.1.2 Langley Research Center (LRC), Unitary Plan Wind Tunnel (UPWT)

The Unitary Plan Wind Tunnel is a closed-circuit, continuous flow, variable-density, asymmetric sliding-block-type tunnel consisting of two test sections. In one of the test sections the Mach number can be varied from 1.47 to 2.86 and the stagnation pressure can be varied from 3 to 51 psia, whereas for the other test section the Mach number can be varied from 2.29 to 4.63 and the stagnation pressure can be varied from 3 to 142 psia. Each test section is 4 ft square and 7 ft long.

The model support system consists of a pitch sector, boom, and sting which provide a pitch capability from -20 to 20 deg with respect to the tunnel centerline. The center of rotation is located in the test section and may be adjusted over a limited longitudinal range. A more thorough description of the tunnel may be found in Refs. 7, 8, and 9.

2.1.3 Naval Ship Research and Development Center (NSRDC), 7 by 10 Foot Transonic Wind Tunnel (7 x 10)

The NSRDC 7 by 10 Foot Transonic Wind Tunnel is a closed-loop, continuous flow, variable-density tunnel in which the Mach number can be varied from 0.40 to 1.17. The tunnel stagnation pressure can be varied with Mach number and the variation depends on Mach number. The tunnel stagnation pressure range is 4 to 26 psia. The test section is rectangular and measures 7 ft in height, 10 ft in width, and 19 ft in length. The test section is enclosed in a pressure-tight chamber. The floor and ceiling of the test section are slotted and have diffuser flaps at the end of each slot to control flow entry and Mach number.

The model support system consists of a pitch-sideslip sector, boom, and sting which provide remote-control capability in pitch, sideslip, and roll of from -4 to 29 deg, -25 to 25 deg, and -180 to 180 deg, respectively. A more thorough description of the tunnel may be found in Refs. 10, 11, and 12.

2.2 TEST ARTICLES

The test articles, which were furnished by the Martin Marietta Corporation, consisted of five body configurations, three wing configurations, and 15 tail fin configurations. Dimensional sketches in Figs. 3 and 4 show the body and wing configurations, respectively. Photographs of the tail fins are shown in Fig. 5 and tail fin dimensions are shown in Fig. 6. Both wings and tail fins were modified double-wedge airfoils, with leading- and trailing-edge semivertex angles of 4 deg. and slightly rounded (0.015-in. radius) edges. All model dimensions shown in the sketches and used in the data reduction were obtained from the original model drawings; however, when the dimensions of the tail fins were measured, they were, in several cases, different from the drawings. The measured tail fin dimensions are presented in Table 1 for all fins of each tail fin configuration.

For the wing-body configurations, the wings were mounted in the horizontal plane of symmetry with the length, L , defining the axial distance between the model nose and the intersection of the wing leading edge with the body. The tail fins were mounted on the missile body with the four fins in a "plus," cruciform pattern. The tail fins were positioned such that the trailing edge of each fin was in the plane of the model base. The fins could be manually adjusted for deflection angles of 0, ± 10 , ± 20 , and ± 30 deg.

The tail fins were tested singly mounted on a splitter plate using the reflection plane technique. Sketches and a photograph are presented in Figs. 7 and 8 showing the splitter plate tunnel installation for test No. 2. For test No. 2, the splitter plate included a drive mechanism, shown in Fig. 9, which allowed the fin angle to be changed remotely. This

assembly contained a provision for indicating discrete fin angles of 0, 15, 30, 60, 90, 120, 150, and 180 deg. For each discrete fin angle set, the pitch sector angle was varied to obtain the desired angle of attack.

2.3 INSTRUMENTATION

Aerodynamic loads on the complete model were measured with main, six-component, internal, strain-gage balances. In most instances when six-component balance data were obtained, there were four additional three-component, internal, strain-gage balances mounted in the rear section of the model body and used to measure the aerodynamic loads on each tail fin. During the test with the reflection plane, a three-component, strain-gage balance was used to obtain tail fin loads data. For all six-component balance tests one or more base pressures and/or cavity pressures were measured.

3.0 PRESENTATION OF RESULTS

3.1 GENERAL

All main balance data presented have been reduced to coefficient form in the nonrolling axis system. An exception is test No. 6 data which were reduced to coefficient form in the body axis system. When the tail fins are mounted on the missile body, the tail fin data are in an axis system parallel to the missile body axis system; hence, the tail fin normal-force coefficient is based on the force normal to the chordwise plane of the undeflected tail fin, whereas the root bending- and hinge-moment coefficients are referenced to the undeflected tail root chord and hinge lines, respectively. When the tail fin is mounted on the reflection plane, the tail fin data are in the body axis system. All data are correlated into a consistent format with the positive directions of coefficients as shown in Fig. 10. The positive tail fin deflection angles are defined as follows with respect to the unrolled model: tail fins No. 2 and 4, leading edge up; and tail fins No. 1 and 3, leading edge to the right, looking upstream. It should be noted that the tail fin dimensions used in the data reduction are those shown in Fig. 6. The moment reference point (MRP) for the main balance data is located on the body centerline at 50 percent of the model length, and the moment reference point for the fin data is the intersection of the fin hinge line and the fin root chord.

The uncertainties associated with the measured tunnel conditions and aerodynamic coefficients are not available for all the tests. In Tables 2 and 3 are presented the maximum data uncertainties quoted in Refs. 1 and 3 for tests No. 1 and 6, respectively. In Tables 4, 5, and 6, the data uncertainties quoted in Ref. 2 for test No. 2 are presented.

Complete tabulated data are presented in Appendixes A through G, and selected data are presented in plotted form in Figs. 11 through 66. Indexes of the data are presented in Tables 7 through 13. Also, brief discussions of the results of each test are presented in Sections 3.2 through 3.8. The tabulated data, plots, indexes, and discussion are arranged according to test numbers, as identified in Section 1.0.

The indexes list the configurations and the pertinent parameters for each test. The configuration code corresponds to the body, wing, and fin designations of Figs. 3 through 6, with the addition of the notation B0, W0, and F0 to denote absence of the body, wings, or fins, respectively, for the particular configuration. For each test, the data are indexed according to part number. A circled part number in Tables 7 through 13 indicates that data for that part number are presented in plotted form.

The tabulated data presented in the Appendixes include complete data for all part numbers listed in Tables 7 through 13. The data are ordered according to test number and part number, and within each part number, point numbers are used. Reference should be made to the Nomenclature for the definitions of the symbols. Values of coefficients of 9.9999 are used in the tabulations to indicate deletions of erroneous data.

The plots presented in Figs. 11 through 66 were selected to show basic and typical trends. For convenience and for comparison purposes, data for several part numbers are presented on each page, and therefore, the index of figures, at the beginning of the report, should be used to find plotted data of interest.

The data were machine plotted using a curve-fit fairing between data points for tests No. 1 through 5 except for the splitter plate data of test No. 2 which were not faired. Tests No. 6 and 7 data were machine plotted using straight-line fairings between data points. It should also be noted that to improve the quality of production of the plots several data points were deleted from the plots on all the tests. Additionally, all test data, except splitter plate data of test No. 2, and all data of test No. 7, were symbolized on every fifth consecutive point. In the case of test No. 2 splitter plate data, only every tenth consecutive point was plotted, and symbolized, and in the case of test No. 7 every tenth consecutive point was symbolized. In some cases, particularly tests No. 6 and 7, the curves have a rather random appearance because of the scatter and high density of the original data points.

3.2 TEST NUMBER 1

Plotted data for test No. 1 are presented in Figs. 11 through 15, the tabulated data are presented in Appendix A, and the part number summary is presented in Table 7. In test No. 1, data were obtained on the main balance, the four tail fin balances, and the splitter plate balance, but only the main balance data are presented in this report.

The test was conducted in the AEDC-4T Tunnel at a nominal Reynolds number per foot of 2.3×10^6 . The Mach number range was from 0.8 to 1.3 and the angle-of-attack range was from -3 to 32 deg. Roll angle was not varied and the tail fins were not deflected. Twelve tail fin configurations were tested on the missile body, and body-alone data were obtained for three body configurations.

The details of fixing transition on this test are unknown. In order to provide forebody axial-force coefficients, pressures were measured at two locations at the base of the model and averaged to yield the model base pressure. Some data analysis and additional plotted data can be found in Refs. 1 and 4.

3.3 TEST NUMBER 2

Test No. 2 plotted data are presented in Figs. 16 through 23, the tabulated data are presented in Appendix B, and the part number summary is presented in Table 8. For test No. 2, data are presented for the main balance as well as the four tail fin balances and the splitter plate balance.

The test was conducted in the AEDC-4T Tunnel at a nominal Reynolds number per foot of 2.5×10^6 . The Mach number range was from 0.80 to 1.30. There were five tail fin configurations tested on the missile body and three tail fin configurations tested on the splitter plate. The angle-of-attack range for the missile was from -2 to 30 deg with the tail fins undeflected throughout the test. The angle-of-attack range of the tail fins mounted on the splitter plate was from 0 to 210 deg.

In addition, a Reynolds number study was conducted using the missile body without tail fins and with tail fins and longitudinal transition strips. With the finned missile configuration, data were obtained with 1/8-in.-wide, No. 60 Carborundum® grit strips along the length of the constant diameter section of the missile body (aft of the missile nose section) equally spaced between the fins on the lee side of the model (Fig. 2c). During this study, the Reynolds number per foot was varied from 0.3×10^6 to 4.9×10^6 at a Mach number of 0.59.

The pressure was measured at two locations at the base of the missile body and averaged to yield the model base pressure. Some data analysis and additional plotted data can be found in Ref. 2.

3.4 TEST NUMBER 3

Test No. 3 plotted data are presented in Figs. 24 through 27, the tabulated data are presented in Appendix C, and the part number summary is presented in Table 9. For test No. 3, data are presented for the main balance only.

The test was conducted in the LRC-UPWT at a nominal Reynolds number per foot of 3.0×10^6 except as noted. The Mach number was varied from 2.36 to 4.63 and the angle of attack was varied from -4 to 24 deg at model roll angles of 0 and 45 deg. The tail fin deflections were 0 and 20 deg for tail fins No. 1 and 3 and 0 and -20 deg for tail fins No. 2 and 4. There were three tail fin configurations and one wing configuration tested. In addition, data are presented for the case of the tail fins removed.

For all the data, transition was fixed with a 1/16-in.-wide strip of No. 40 sand located 1.2 in. aft of the body nose and 0.4 in. streamwise aft of the tail fin and wing leading edges.

The model cavity pressure was measured and used for the base pressure. In addition, the model orientation was corrected for tunnel flow angularity.

3.5 TEST NUMBER 4

Test No. 4 plotted data are presented in Figs. 28 and 29, the tabulated data are presented in Appendix D, and the part number summary is presented in Table 10. For test No. 4, data are presented for the main balance only.

The test was conducted in the LRC-UPWT at a nominal Reynolds number per foot of 3.0×10^6 except where noted. The Mach number range was from 2.36 to 4.63 and the angle-of-attack range was from -5 to 22 deg at model roll angles of 0 and -90 deg. The tail fin angle deflections were 0 and 20 deg for tail fins No. 1 and 3 and 0 and -20 deg for tail fins No. 2 and 4. There were six tail fin configurations tested.

For all the data, transition was fixed with single-spaced No. 40 sand particles located 1.2 in. aft of the model nose and 0.4 in. streamwise aft of the tail fin leading edges. The pressure was measured at two locations at the base of the missile body and averaged to yield the model base pressure. Also the pressure in the model cavity was measured. The base and cavity pressures were used to compute the forebody axial-force coefficient. In addition, the model orientation was corrected for tunnel flow angularity.

3.6 TEST NUMBER 5

Test No. 5 plotted data are presented in Figs. 30 through 32, the tabulated data are presented in Appendix E, and the part number summary is presented in Table 11. For test No. 5, data are presented for the tail fin configurations mounted on a splitter plate.

The test was conducted in the LRC-UPWT for a Mach number range from 1.50 to 2.16 and an angle-of-attack range from -6 to 28 deg. Ten tail fin configurations were

tested on the splitter plate. For all the data, transition was fixed with a 1/16-in.-wide strip of No. 60 sand located 0.4 in. streamwise aft of the fin leading edge.

3.7 TEST NUMBER 6

Test No. 6 plotted data are presented in Figs. 33 through 38, the tabulated data are presented in Appendix F, and the part number summary is presented in Table 12. For test No. 6, data are presented for the main balance as well as the four tail fin balances. It should be noted that C_A and C_{AB} were not available from test No. 6.

The test was conducted in the NSRDC 7 X 10 tunnel at the nominal Reynolds number per foot of 1.7×10^6 . The Mach number was varied from 0.85 to 1.10. The angle of attack was varied from -3 to 31 deg and the sideslip angle from -20 to 20 deg. There were three tail fin configurations and three wing configurations tested. The deflections for tail fins No. 1 and 3 were 0, 10, 20, and 30 deg. Tail fins No. 2 and 4 were not deflected. In addition, body-alone data were obtained.

Transition was fixed, as noted in Ref. 3, with No. 90 grit located 1.0 in. aft of the tail fin and wing leading edges. Some data analysis and additional plotted data can be found in Ref. 3.

3.8 TEST NUMBER 7

Test No. 7 plotted data are presented in Figs. 39 through 66, the tabulated data are presented in Appendix G, and the part number summary is presented in Table 13. For test No. 7, data were obtained on the main balance as well as the four tail fin balances.

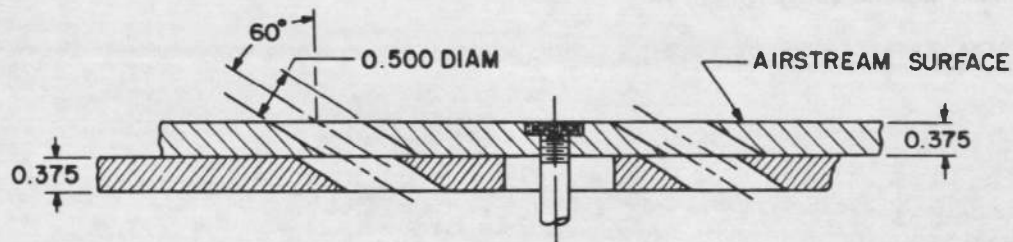
The test was conducted in the NSRDC 7 X 10 tunnel at a nominal Reynolds number per foot of 1.7×10^6 . The Mach number range was from 0.80 to 1.10 and the angle-of-attack range was from -6 to 60 deg at model roll angles of 0 and 45 deg. The deflections for tail fins No. 1 and 3 were zero, and the deflections for tail fins No. 2 and 4 were 0, -10, -20, and -30 deg. There were seven tail fin configurations tested on the missile body configuration. In addition, body-alone data were obtained.

Whether or not the transition was fixed on this test is unknown. Base pressure measurements were obtained.

REFERENCES

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2. Whoric, J. M. "Aerodynamic Characteristics of Several Low Aspect Ratio Stabilizer Fins at Mach Numbers from 0.8 to 1.3." AEDC-TR-72-143 (AD903806L), September 1972.
3. Wilkin, F. D. "Missile Tail Effectiveness in Transonic Flow." Master's Thesis, West Virginia University, 1969.
4. Mottinger, T. A. and Washington, W. D. "An Experimental Investigation of Low Aspect Ratio Fins Tested at Transonic Speeds on a Reflection Plane." U.S. Army Missile Command Report No. RD-TM-71-15, July 1971.
5. Fidler, J. E. and Bateman, M. C. "Aerodynamic Methodology (Isolated Fins and Bodies)." U.S. Army Missile Command OR12399, March 1973.
6. Test Facilities Handbook (Tenth Edition). "Propulsion Wind Tunnel Facility, Vol. 4." Arnold Engineering Development Center, May 1974.
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8. Schaefer, W. T., Jr. Characteristics of Major Active Wind Tunnels at the Langley Research Center. "Langley Unitary Plan Wind Tunnel." NASA TMX-1130, July 1965.
9. Pirrello, C. J., Hardin, R. D., Heckart, M. V., and Brown, K. R. An Inventory of Aeronautical Ground Research Facilities, Volume I - Wind Tunnels. "NASA Langley Research Center - Unitary Plan Wind Tunnel." NASA CR-1874, November 1971.
10. Thomas, W. S. "The David Taylor Model Basin 7- by 10-Foot Transonic Wind Tunnel Facility." AERO Report 985, July 1960.
11. Fresh, J. N. The Aerodynamics Laboratory (The First 50 Years). "7- by 10-Foot Transonic Wind Tunnel." AERO Report 1070, January 1964.
12. Pirrello, C. J., Hardin, R. D., Heckart, M. V., and Brown, K. R. An Inventory of Aeronautical Ground Research Facilities, Volume I - Wind Tunnels. "Naval Ship Research and Development Center - 7-Foot by 10-Foot Transonic Wind Tunnel." NASA CR-1874, November 1971.



TYPICAL PERFORATED WALL CROSS SECTION

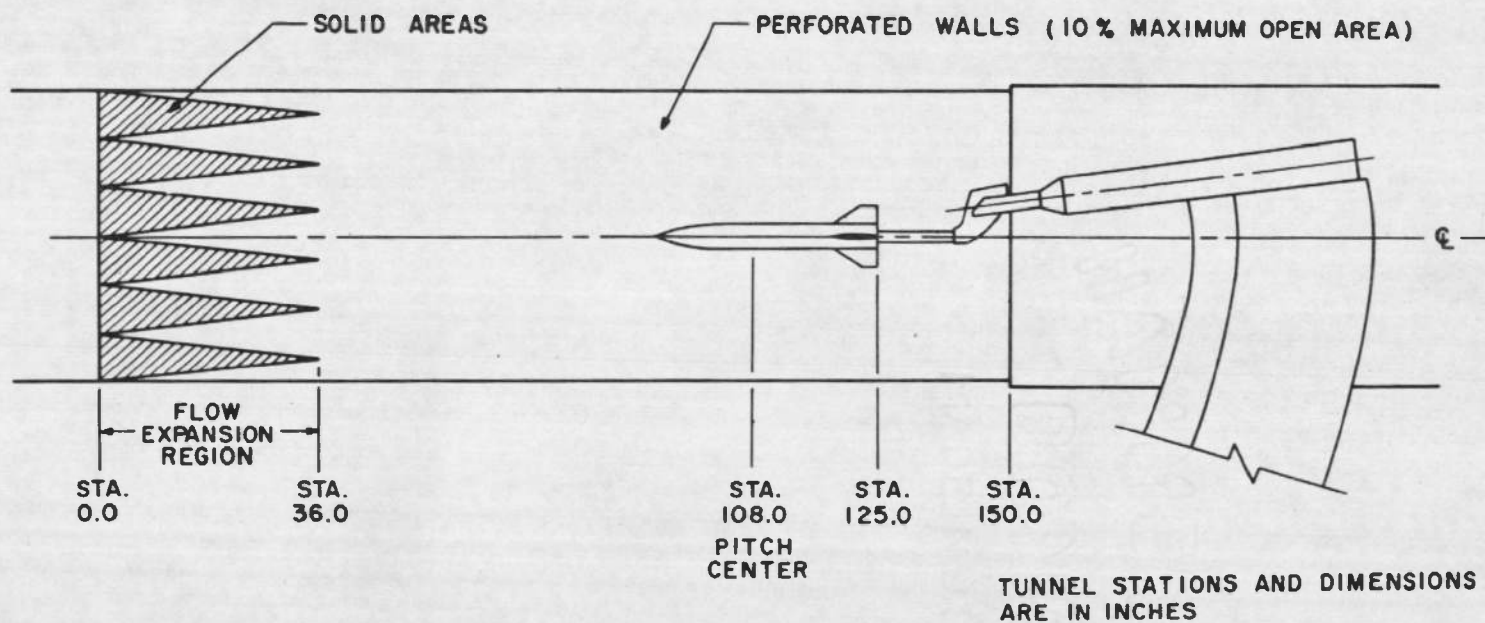
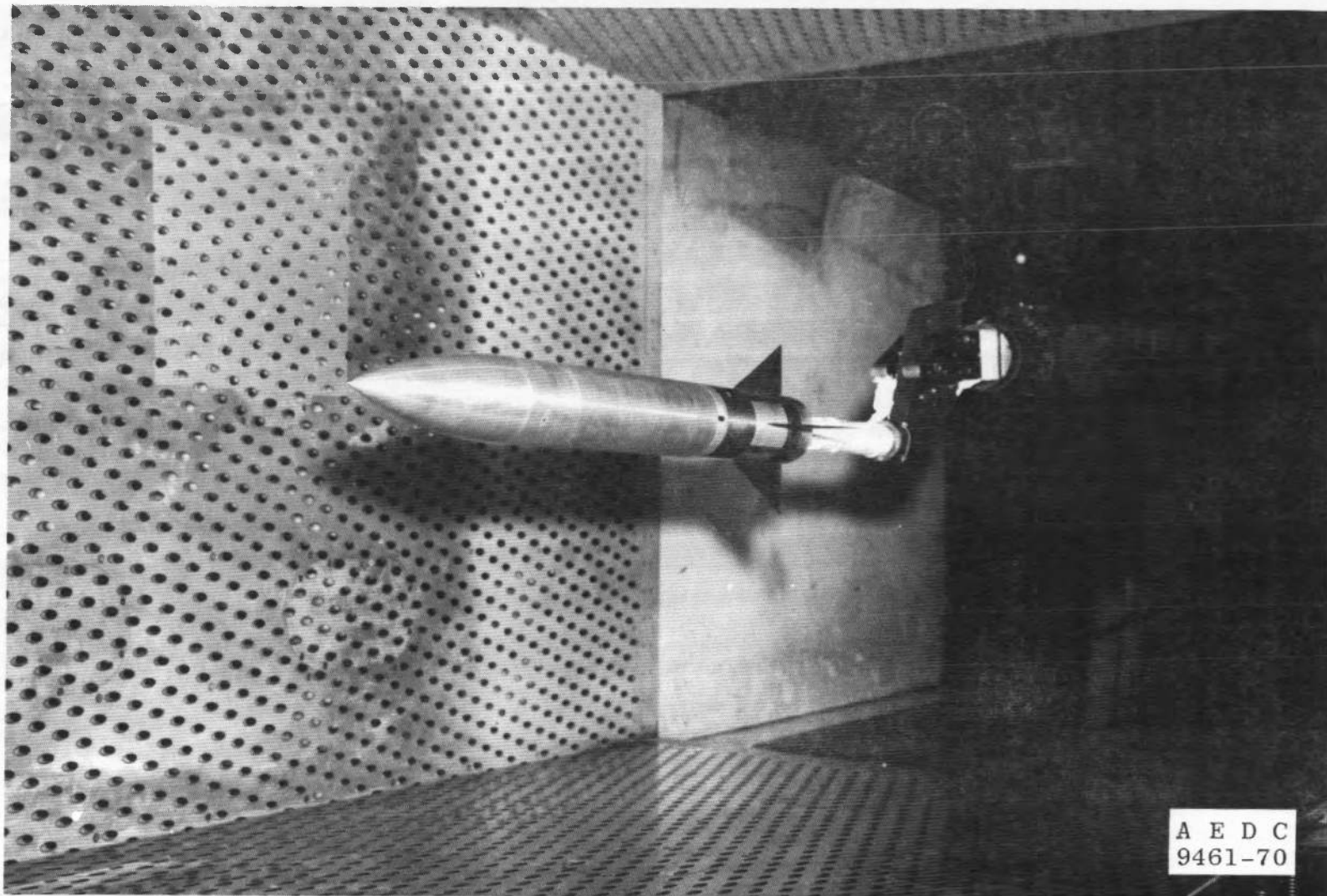


Figure 1. Sketch of test No. 1 model installation.

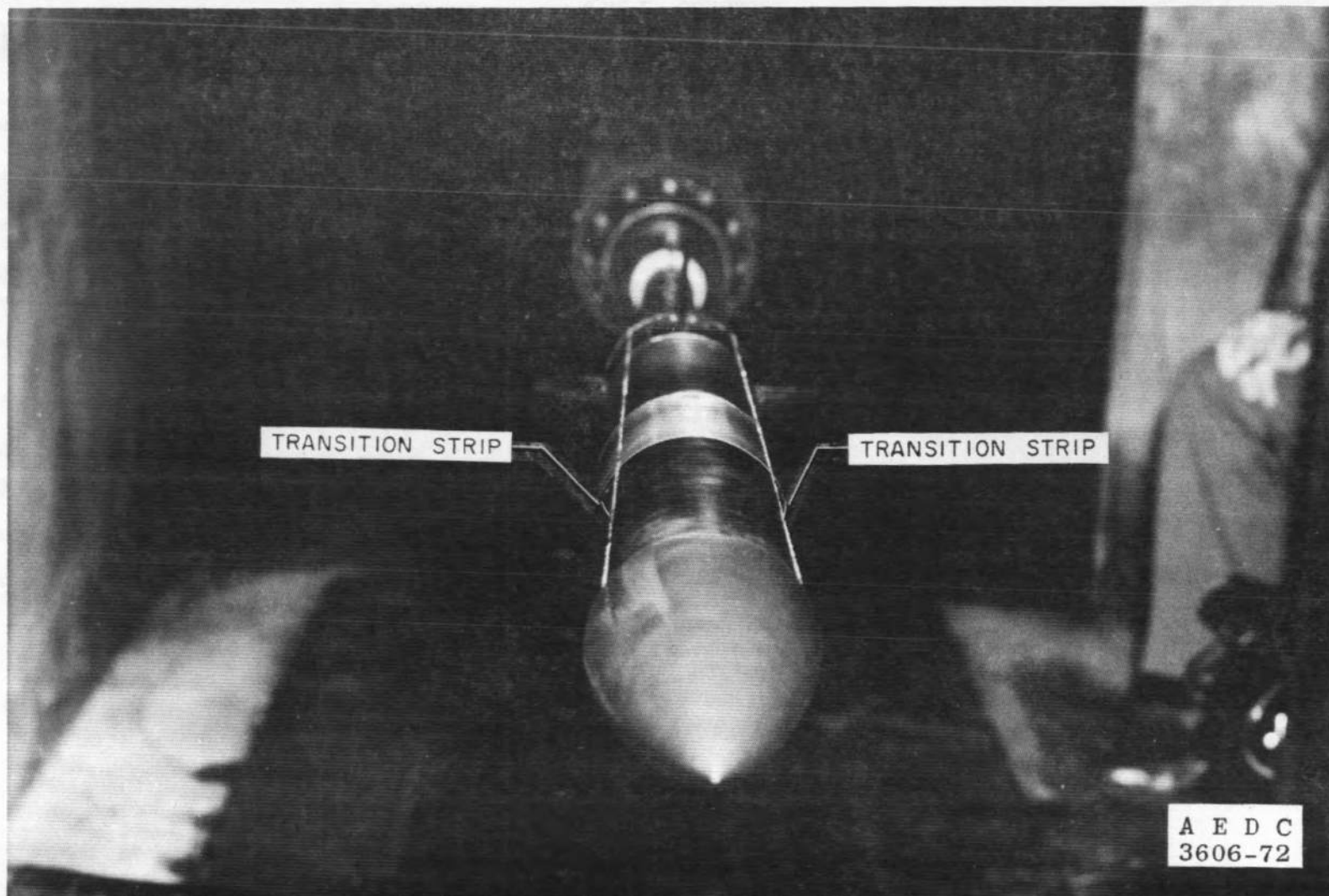


a. Test No. 1, front quarter view

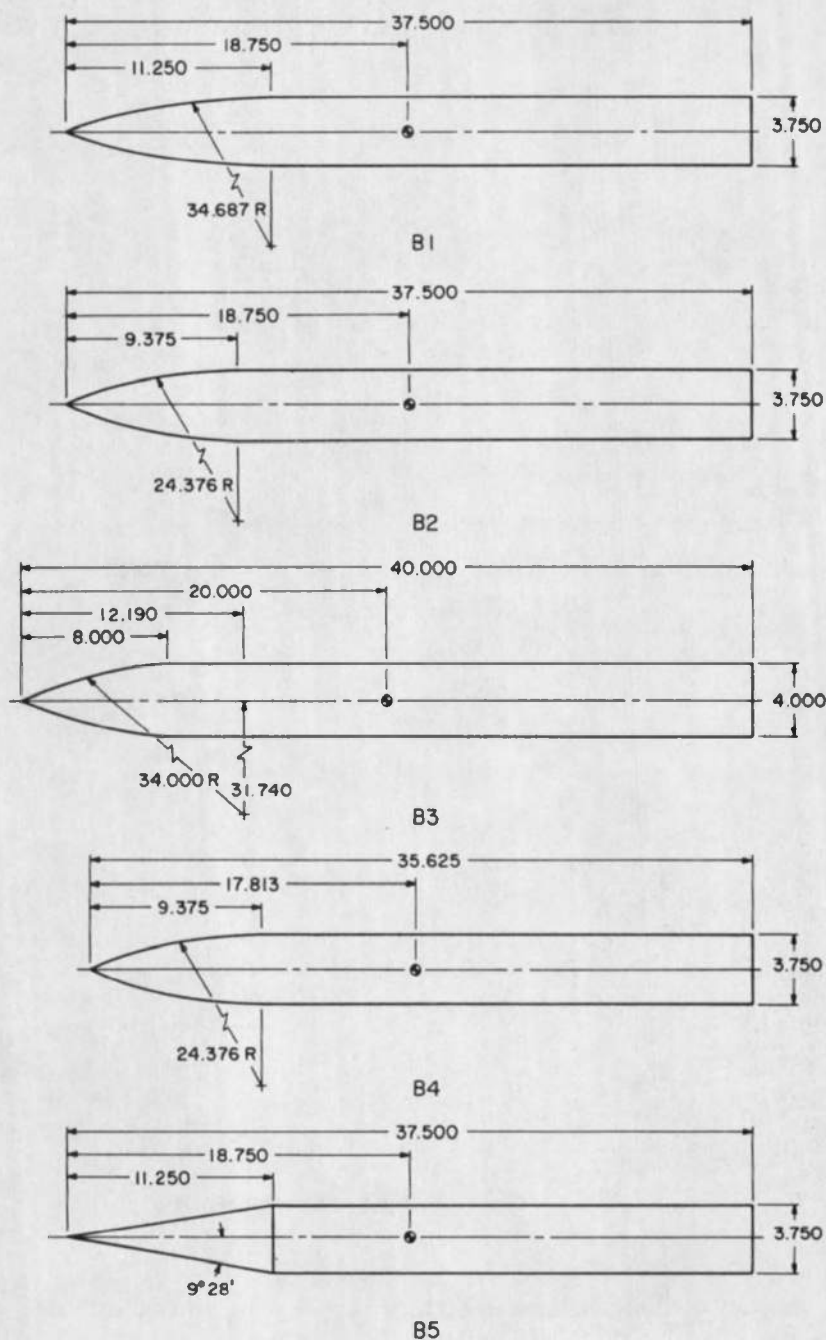
Figure 2. Photographs of model installation in Tunnel 4T.



b. Test No. 2, front quarter view
Figure 2. Continued.



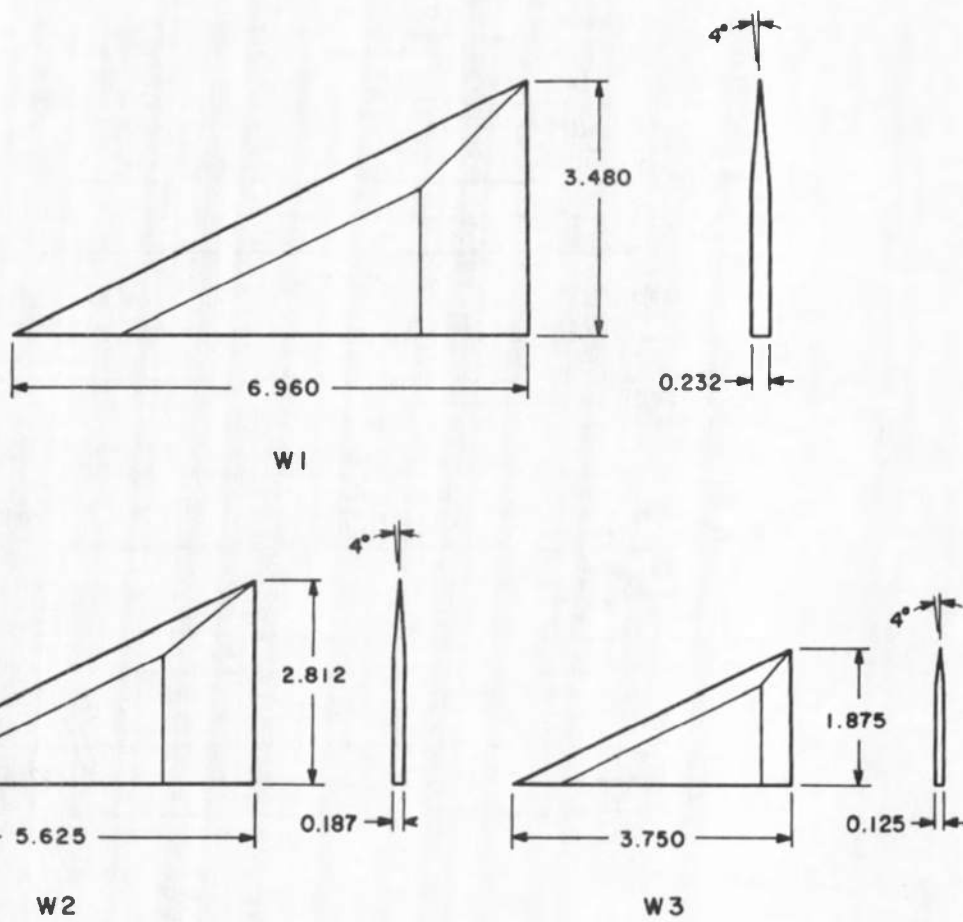
c. Test No. 2, front view showing grit location
Figure 2. Concluded.



DIMENSIONS IN INCHES

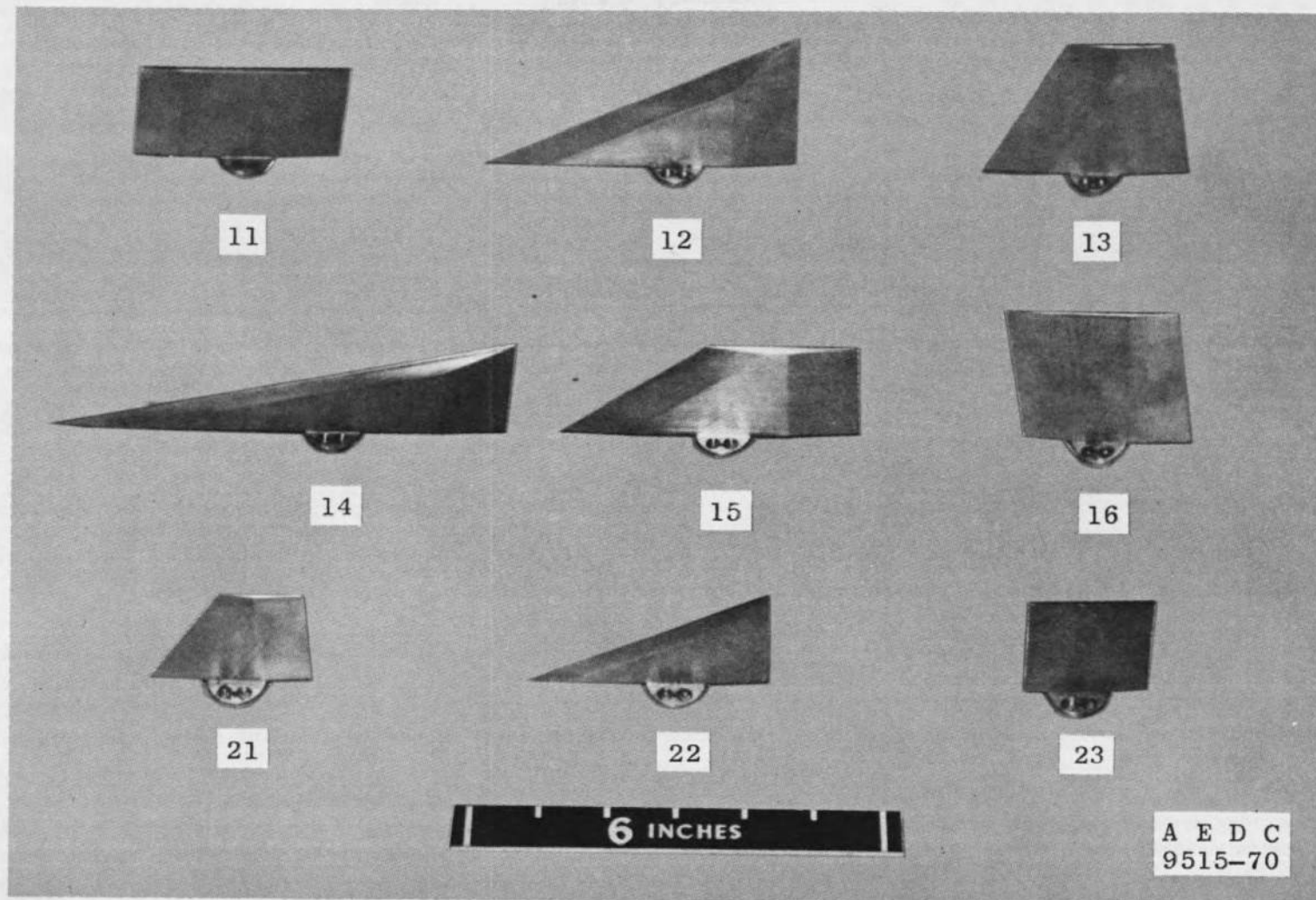
Note: The Body Configuration Shapes are as Follows:
 Configurations B1, B2, and B4 are Tangent-Ogive Cylinder.
 Configuration B3 is a Secant-Ogive Cylinder.
 Configuration B5 is a Cone Cylinder.
 ● Moment Reference Point.

Figure 3. Dimensional sketch of model body configurations.

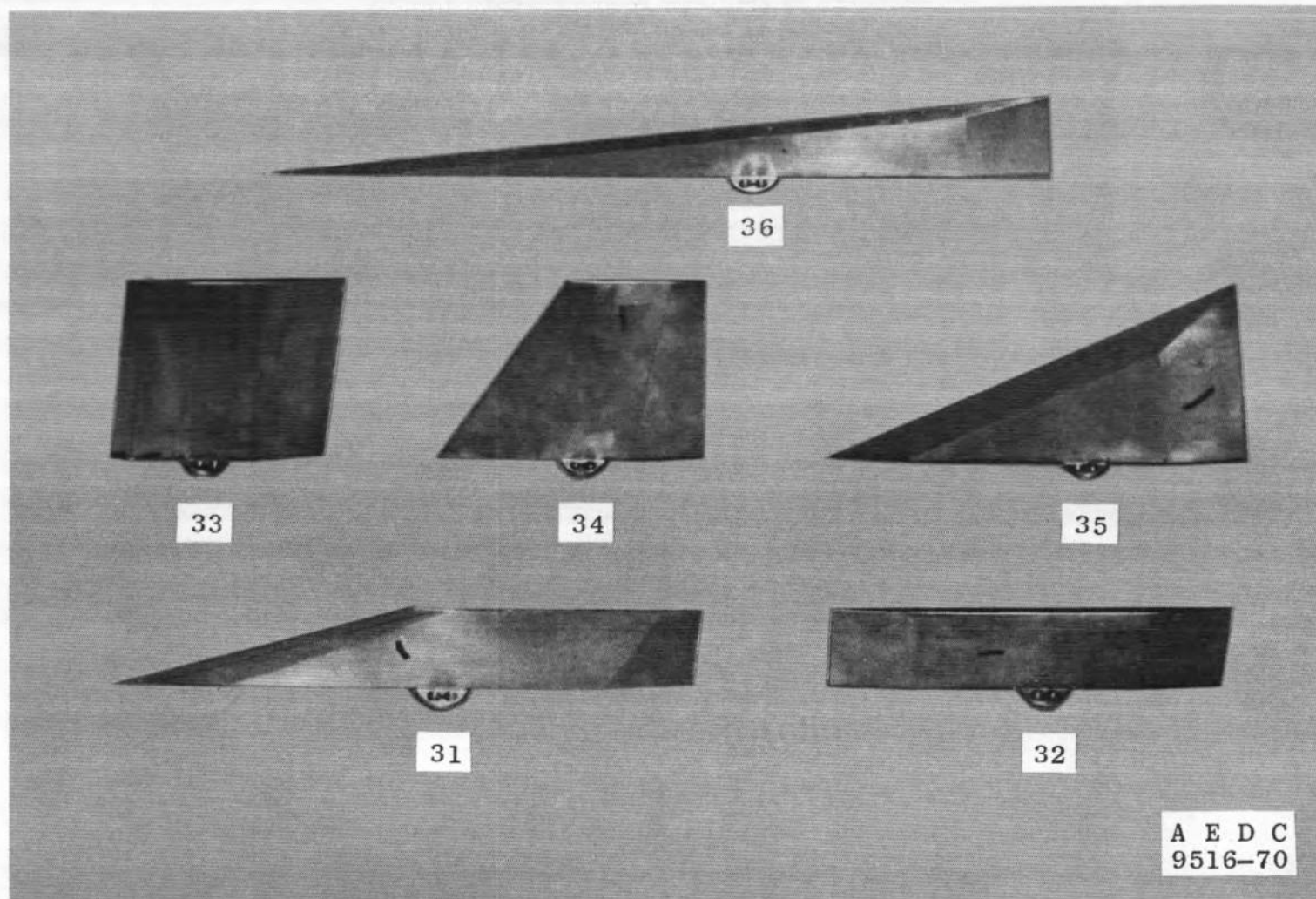


DIMENSIONS IN INCHES

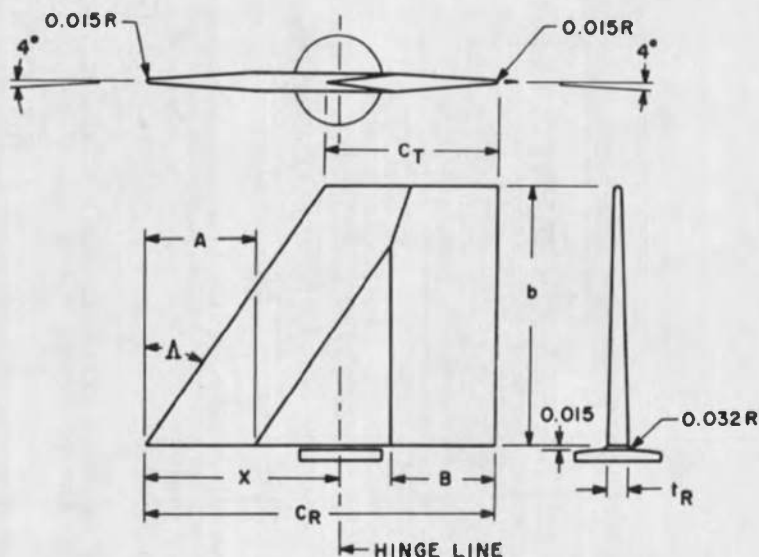
Figure 4. Dimensional sketch of model wing configurations.



a. Tail fin configurations F11 through F23
Figure 5. Photographs of model tail fin configurations.



b. Tail fin configurations F31 through F36
Figure 5. Concluded.



TAIL FIN CONFIG.	S_F ft ²	AR	b in.	λ	Λ	A in.	C_T in.	B in.	C_R in.	X in.	t_R in.
F11	0.04883	0.5	1.875	1.0	0°	0.800	3.750	0.800	3.750	1.687	0.140
F12	0.05492	1.0	2.812	0	$63^\circ 26'$	1.172	0	1.140	5.625	3.487	0.187
F13	0.05488	1.0	2.812	0.5	$33^\circ 41'$	1.158	1.873	1.140	3.747	2.061	0.187
F14	0.04883	0.5	1.875	0	$75^\circ 57'$	1.195	0	1.140	7.500	4.650	0.187
F15	0.04877	0.5	1.875	0.5	$53^\circ 6'$	1.165	2.497	1.140	4.994	2.746	0.187
F16	0.05491	1.0	2.812	1.0	0°	0.800	2.812	0.800	2.812	1.265	0.140
F21	0.02439	1.0	1.874	1.0	0°	0.696	1.874	0.696	1.874	0.843	0.125
F22	0.02441	1.0	1.875	0	$63^\circ 26'$	0.728	0	0.694	3.750	2.325	0.125
F23	0.02505	1.0	1.875	0.5	$34^\circ 22'$	0.713	1.282	0.694	2.565	1.411	0.125
F31	0.09746	0.25	1.875	0.5	$69^\circ 24'$	1.626	4.990	1.587	9.980	5.489	0.250
F32	0.09766	0.25	1.875	1.0	0°	1.587	7.500	1.587	7.500	3.375	0.250
F33	0.13414	1.0	4.395	1.0	0°	1.587	4.395	1.587	4.395	1.978	0.250
F34	0.12784	1.0	4.395	0.5	$32^\circ 25'$	1.606	2.792	1.587	5.585	3.072	0.250
F35	0.13385	1.0	4.395	0	$63^\circ 23'$	1.619	0	1.587	8.771	5.438	0.250
F36	0.09764	0.25	1.875	0	$82^\circ 52'$	1.682	0	1.587	14.998	9.298	0.250

Note: Dimensions of the Tail Fin Configurations from the Original Model Drawings.

Figure 6. Dimensions of the tail fin configurations.

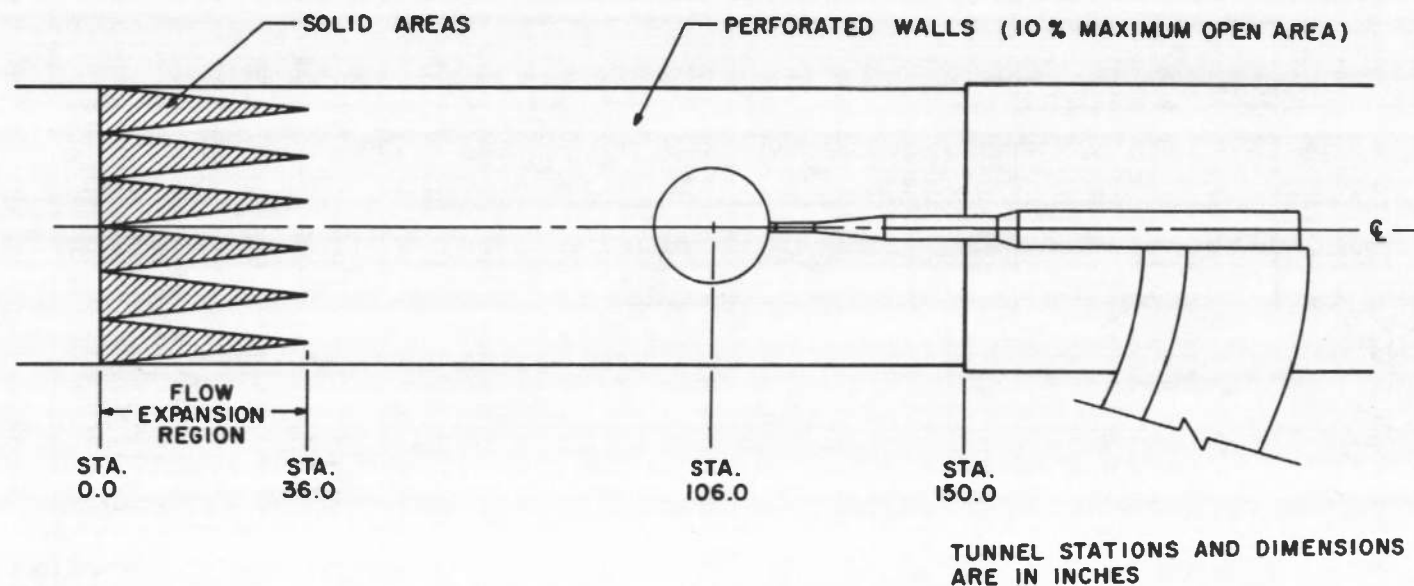
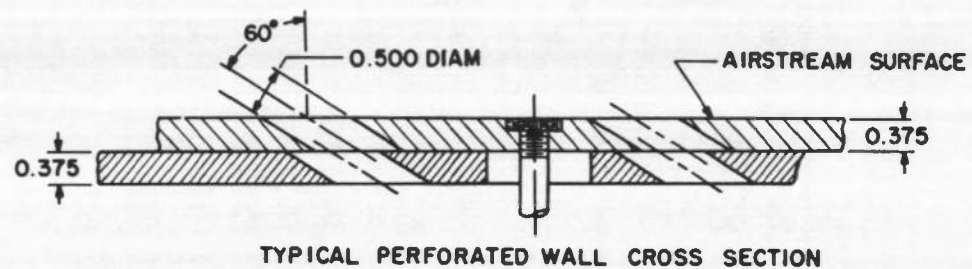


Figure 7. Sketch of test No. 2 splitter plate tunnel installation.

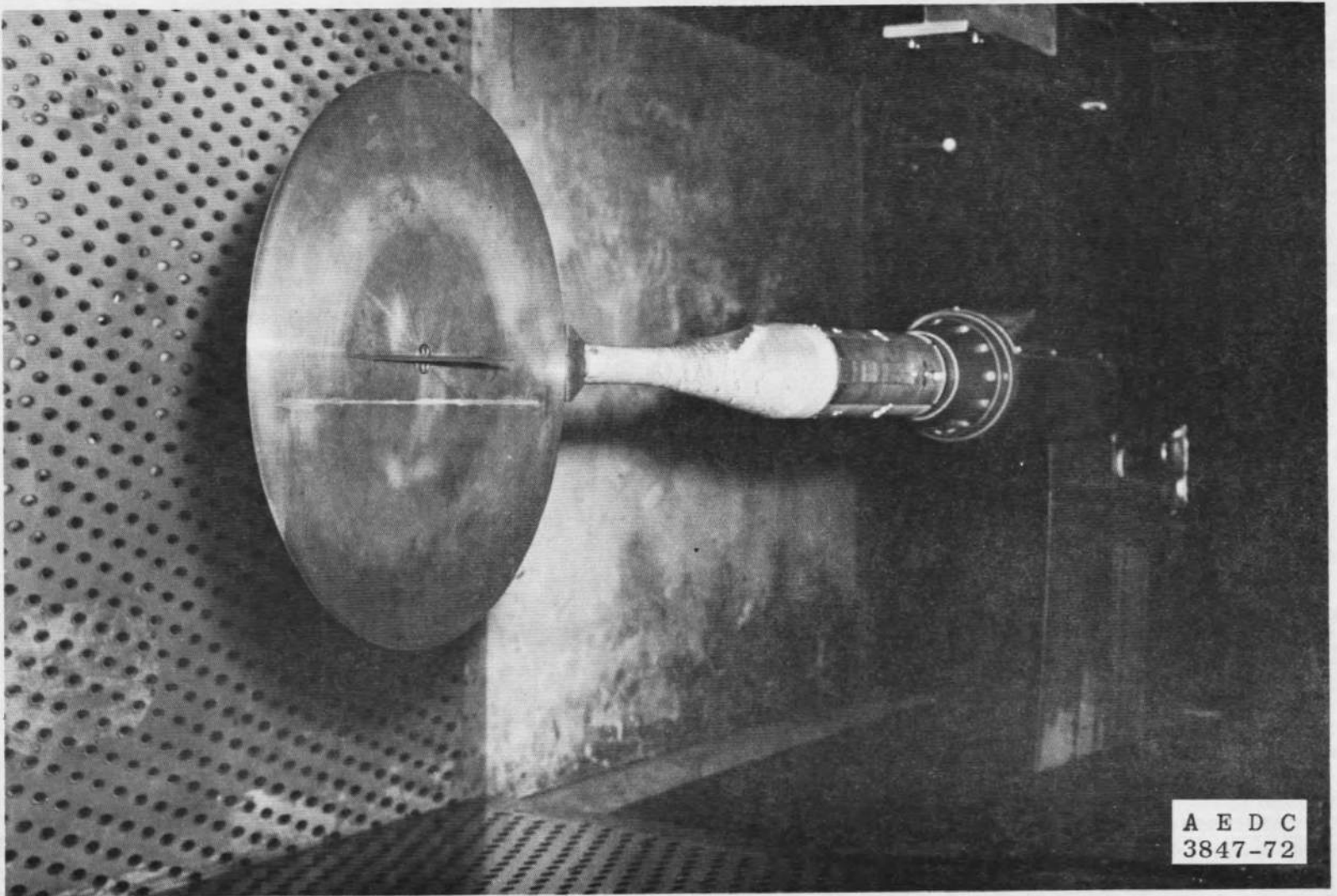


Figure 8. Photograph of test No. 2 splitter plate installation.

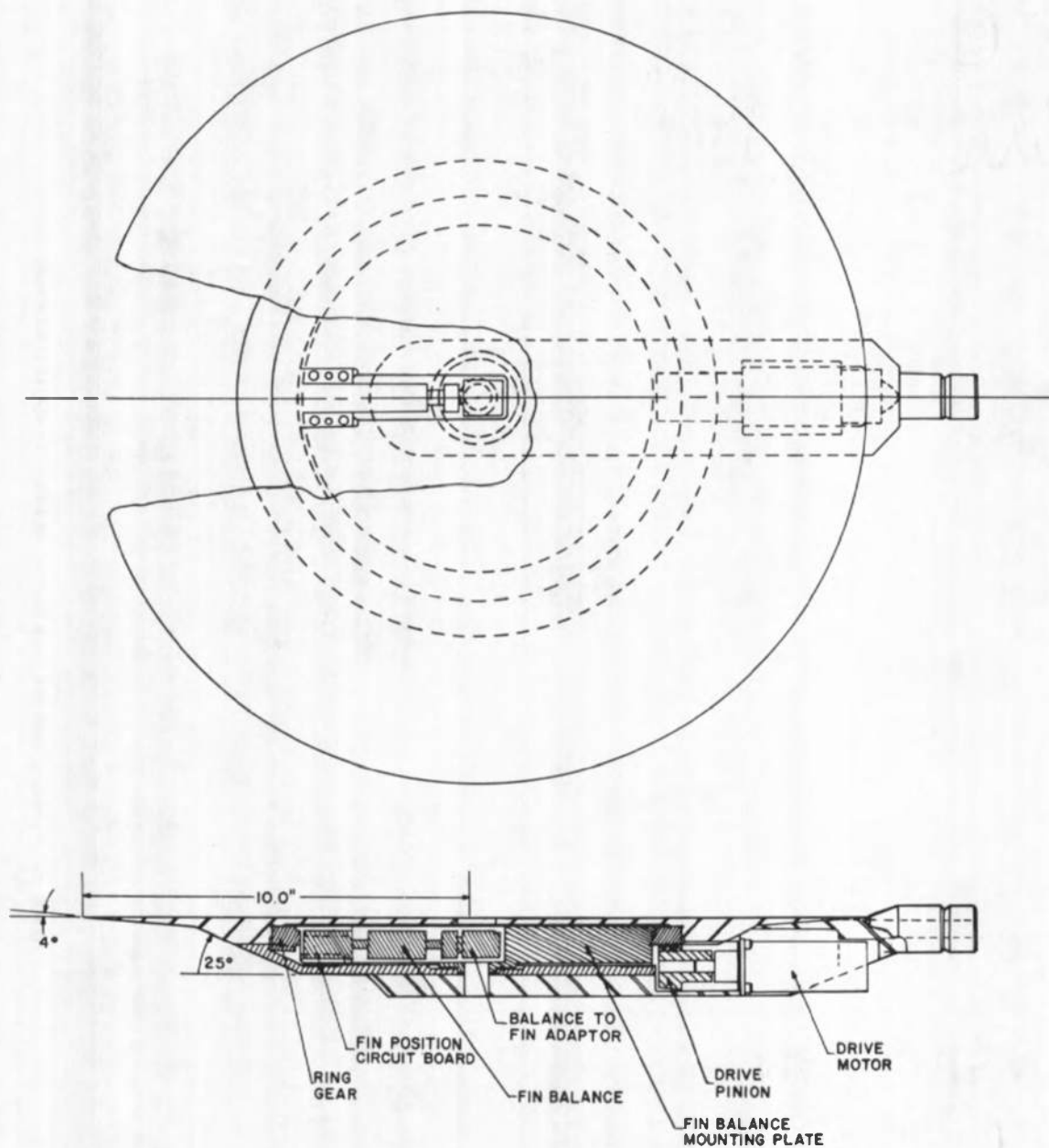


Figure 9. Sketch of splitter plate used in test No. 2.

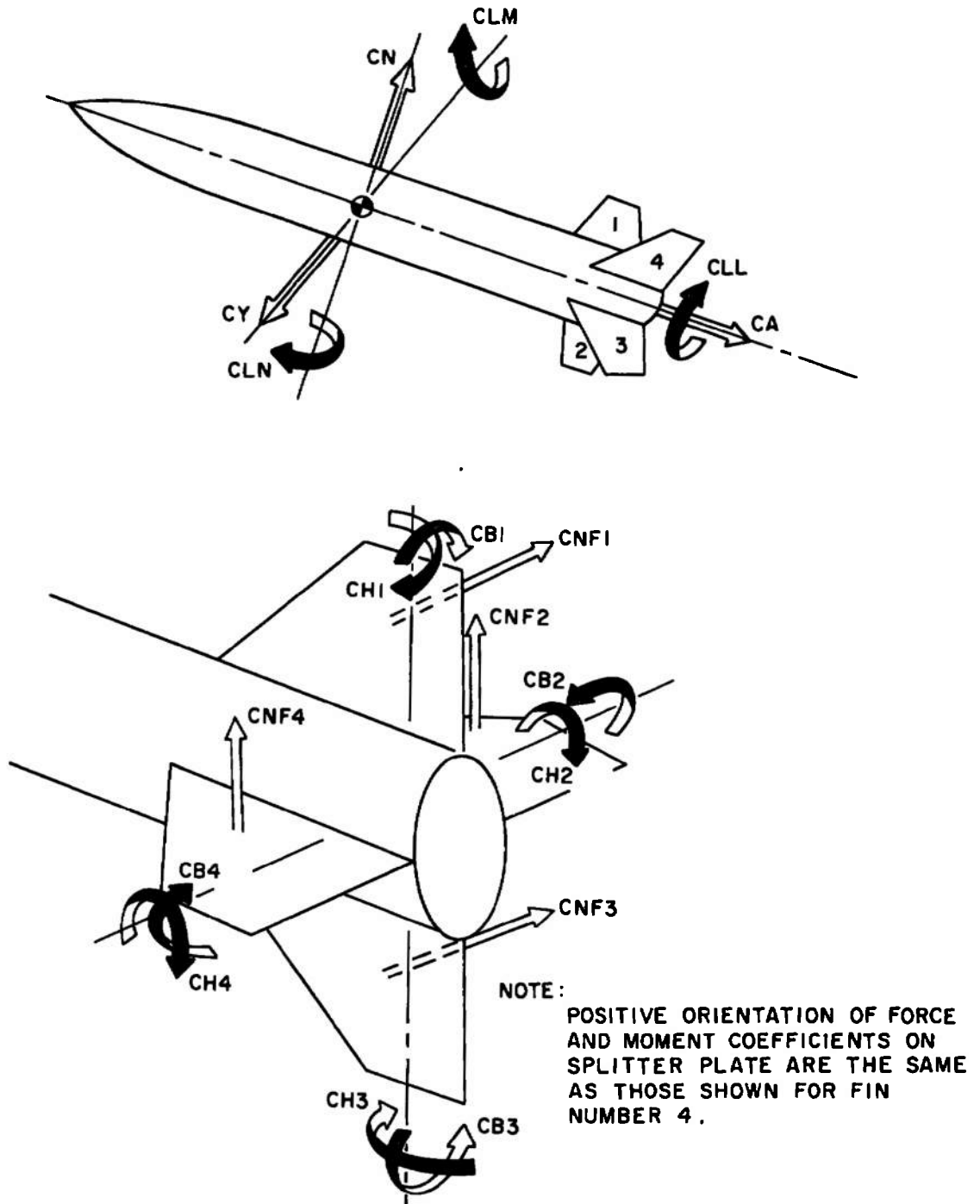


Figure 10. Positive orientations of model aerodynamic coefficients.

TEST CENTER AEDC TEST 1

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4W0F12	0	0	0	0	0	0
□	B4W0F13	0	0	0	0	0	0
△	B4W0F16	0	0	0	0	0	0

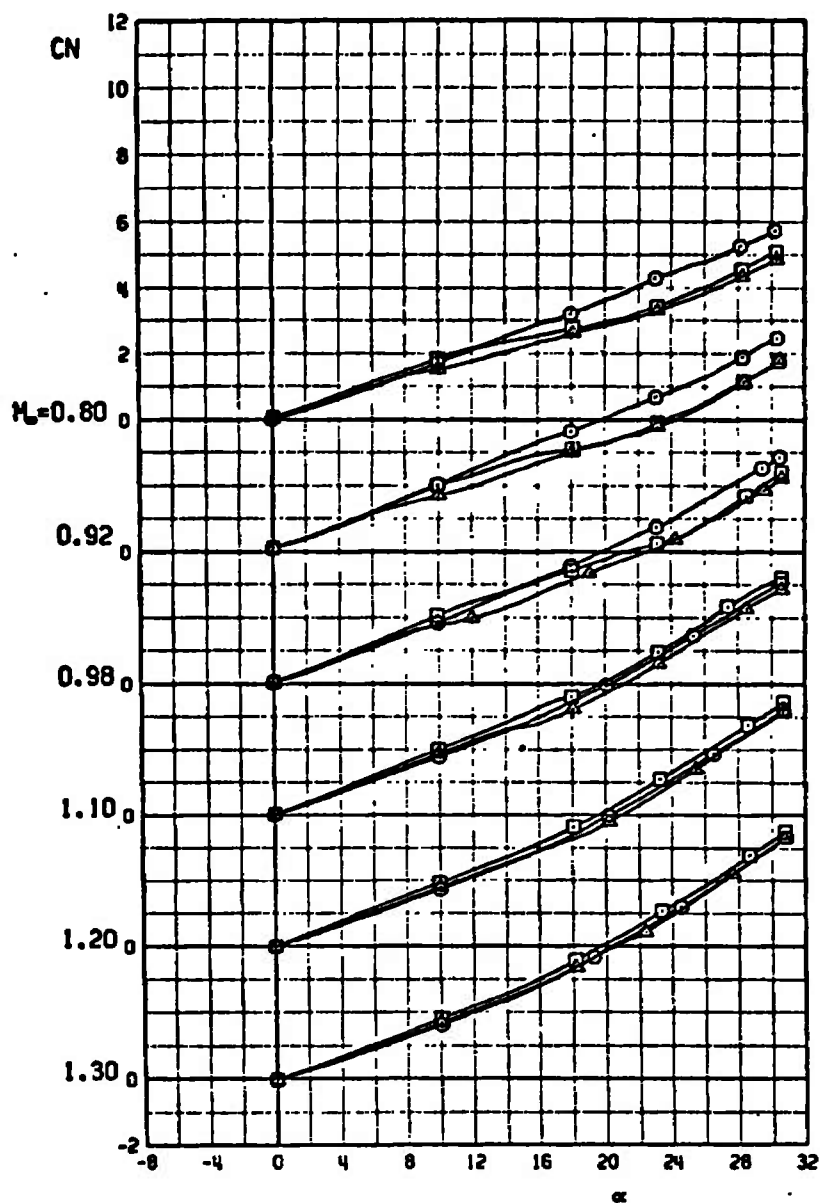
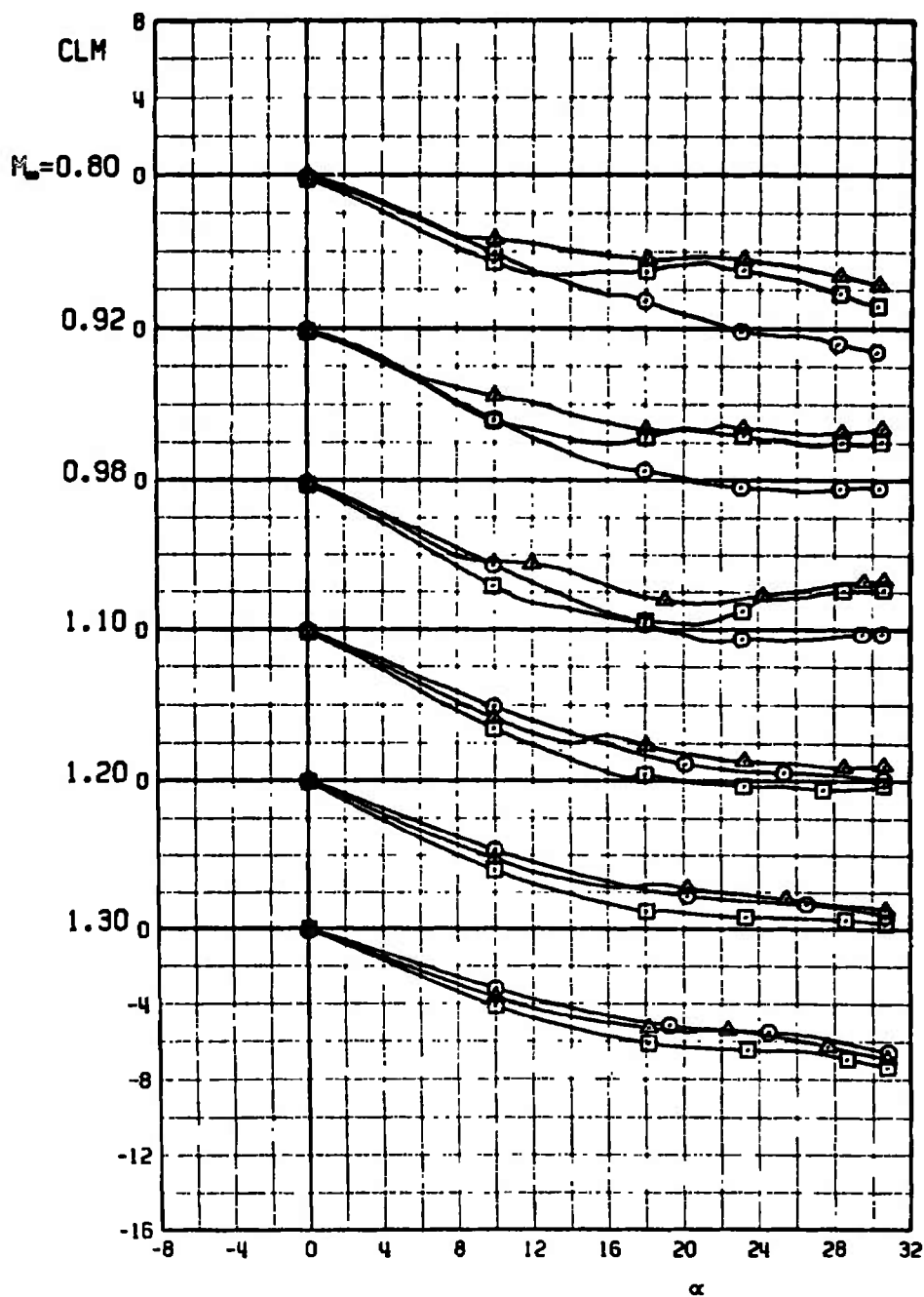
a. CN versus α

Figure 11. Test No. 1, comparison of aerodynamic coefficients of configurations B4W0F12, B4W0F13, and B4W0F16.

TEST CENTER AEDC TEST 1

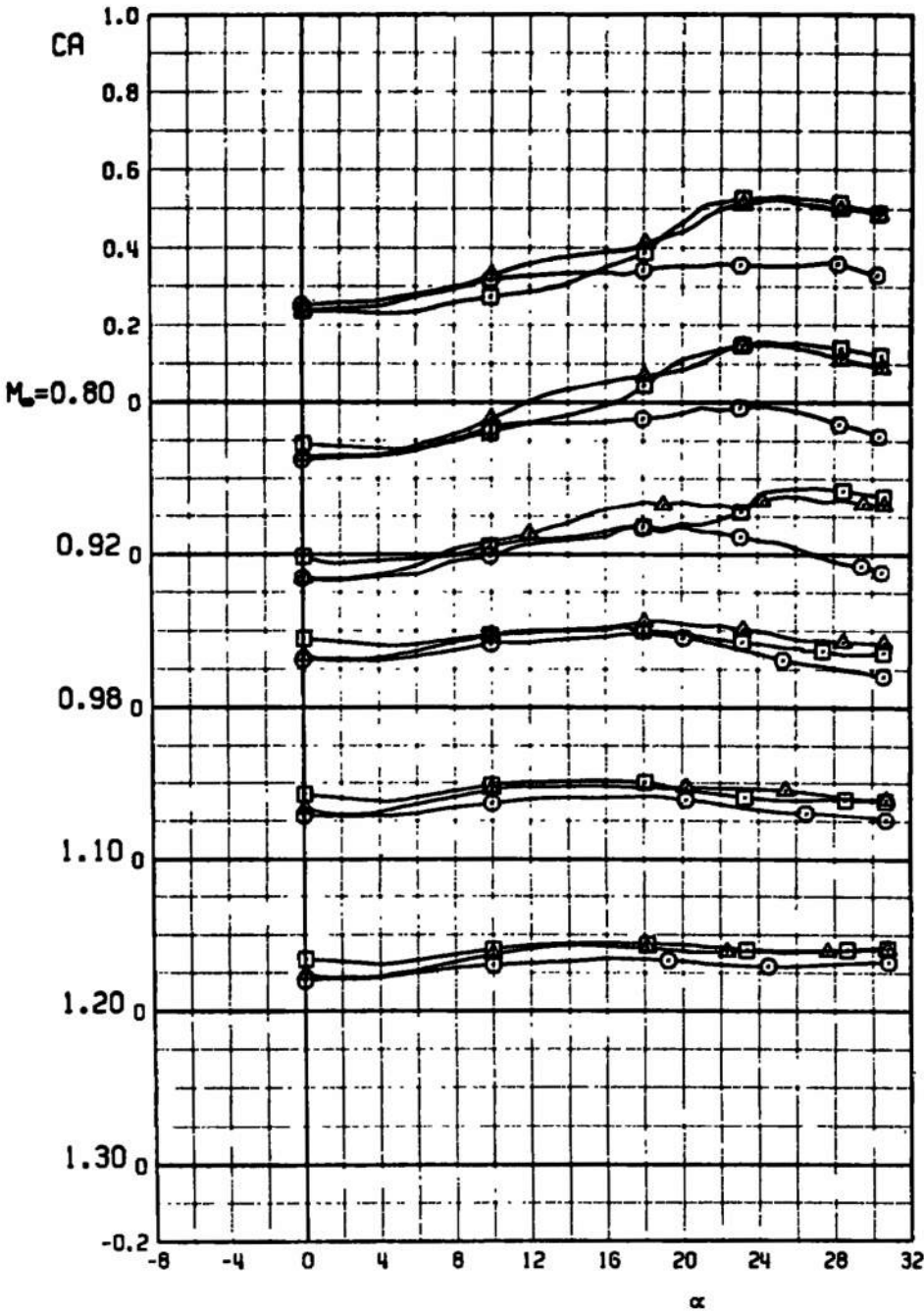
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○	B4WOF12	0	0	0	0	0	0
□	B4WOF13	0	0	0	0	0	0
△	B4WOF16	0	0	0	0	0	0



b. CLM versus α
Figure 11. Continued.

TEST CENTER AEDC TEST 1

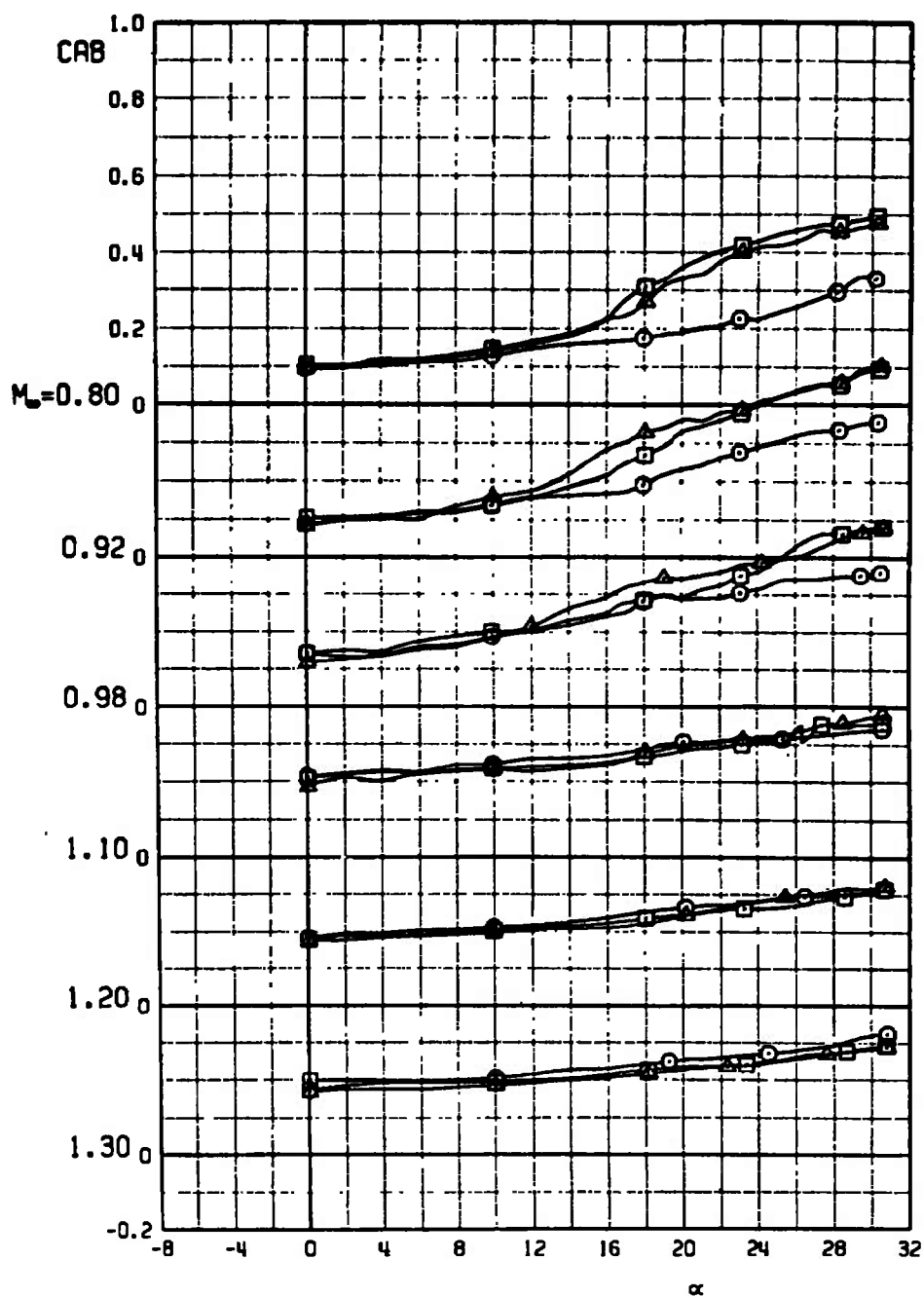
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF12	0	0	0	0	0	0
□	B4WOF13	0	0	0	0	0	0
△	B4WOF16	0	0	0	0	0	0



c. CA versus α
Figure 11. Continued.

TEST CENTER AEOC TEST 1

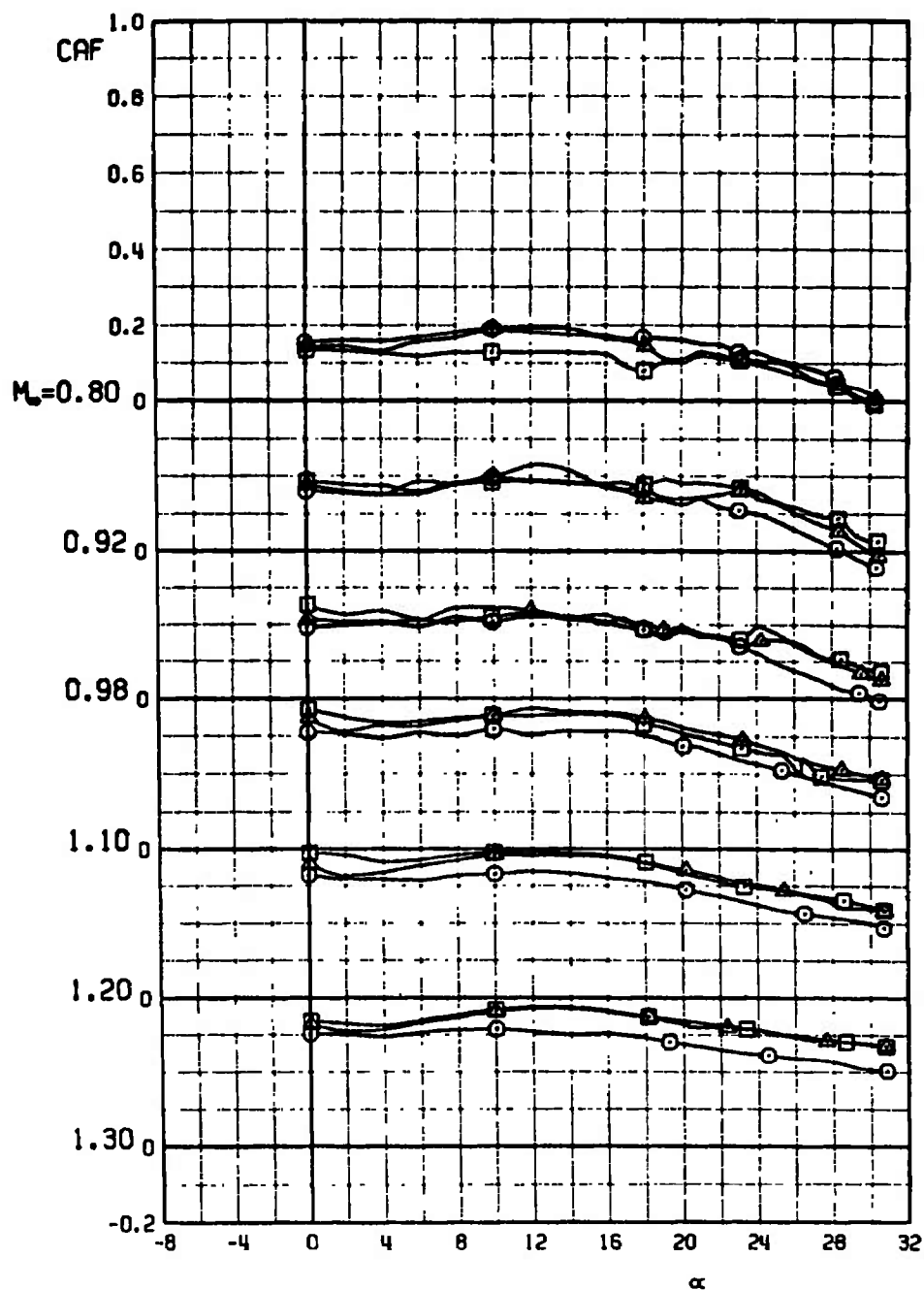
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF12	0	0	0	0	0	0
□	B4WOF13	0	0	0	0	0	0
△	B4WOF16	0	0	0	0	0	0



d. CAB versus α
Figure 11. Continued.

TEST CENTER AEDC TEST 1

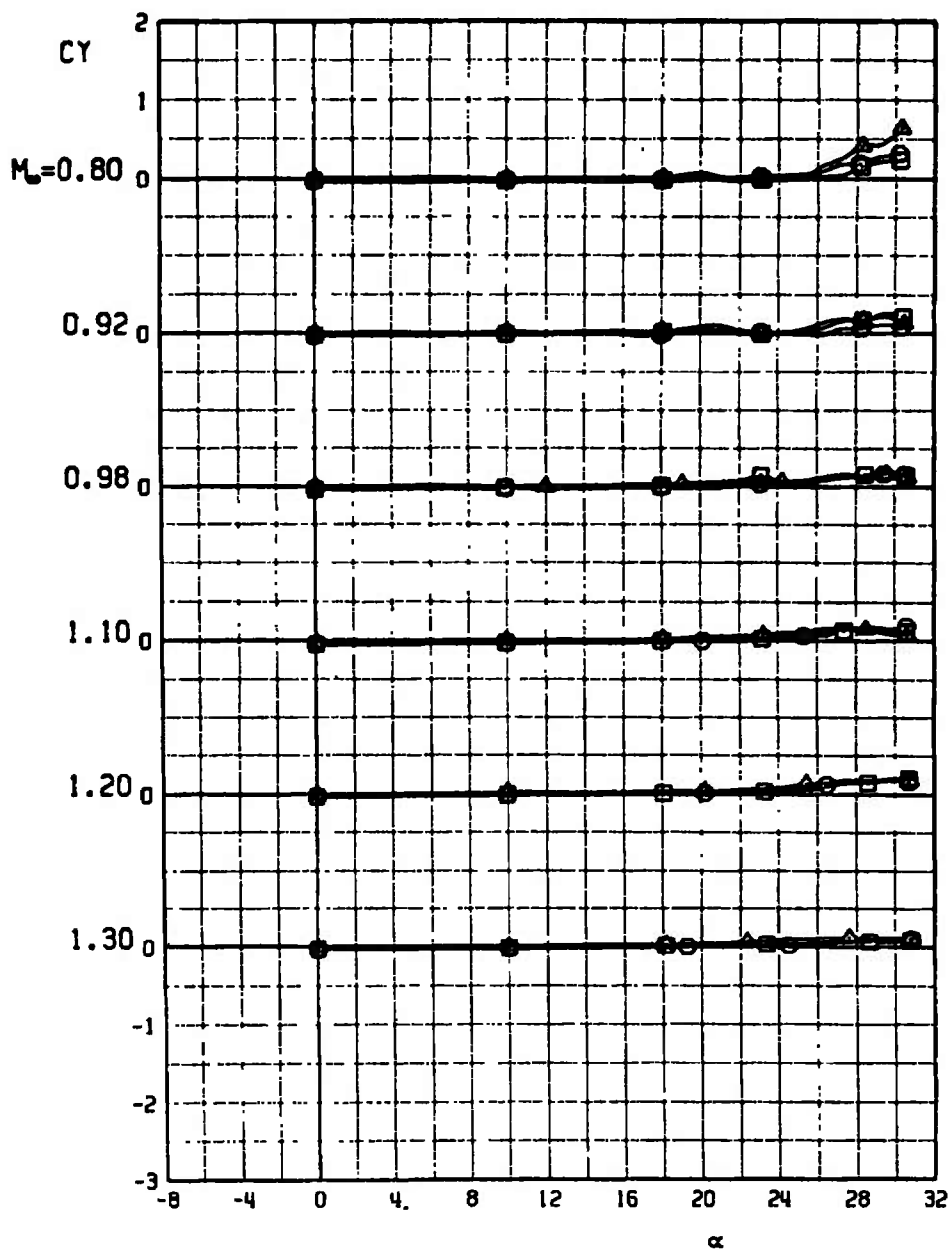
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
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□	B4WOF13	0	0	0	0	0	0
△	B4WOF16	0	0	0	0	0	0



e. CAF versus α
Figure 11. Continued.

TEST CENTER AEDC TEST 1

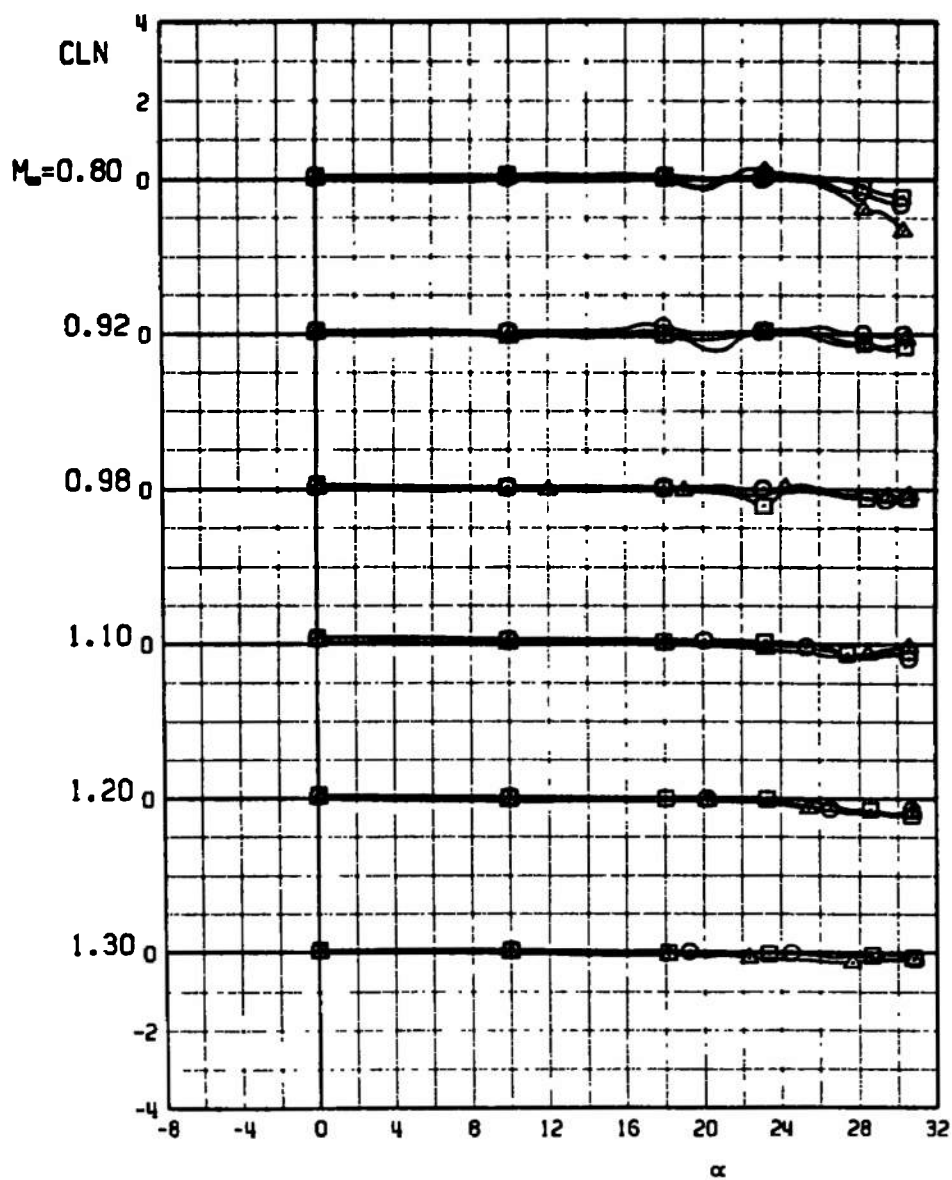
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF12	0	0	0	0	0	0
□	B4WOF13	0	0	0	0	0	0
△	B4WOF16	0	0	0	0	0	0



f. CY versus α
Figure 11. Continued.

TEST CENTER AEDC TEST 1

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF12	0	0	0	0	0	0
□	B4WOF13	0	0	0	0	0	0
△	B4WOF16	0	0	0	0	0	0



g. CLN versus α
Figure 11. Continued.

TEST CENTER AEDC TEST 1

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4HOF12	0	0	0	0	0	0
□	B4HOF13	0	0	0	0	0	0
△	B4HOF16	0	0	0	0	0	0

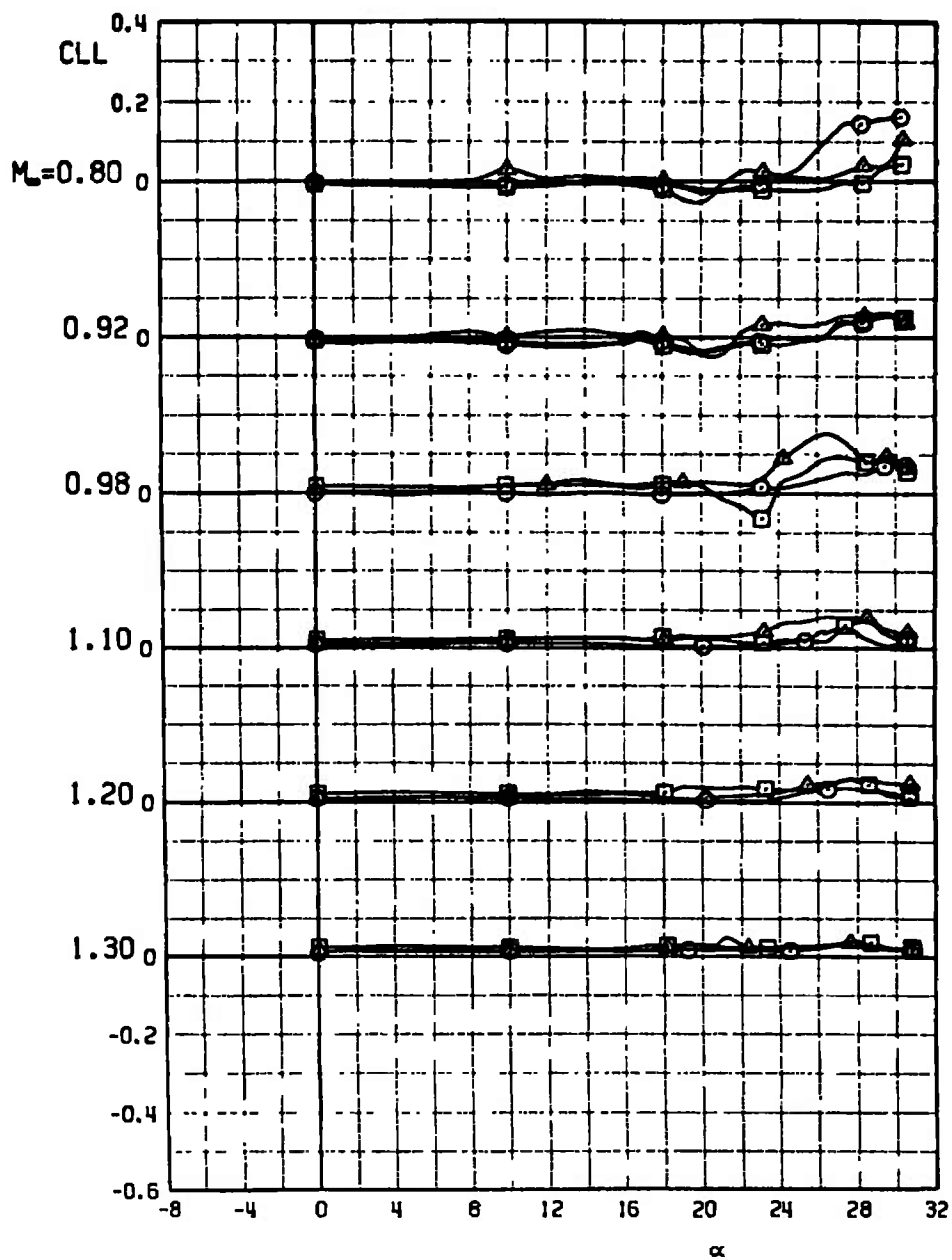
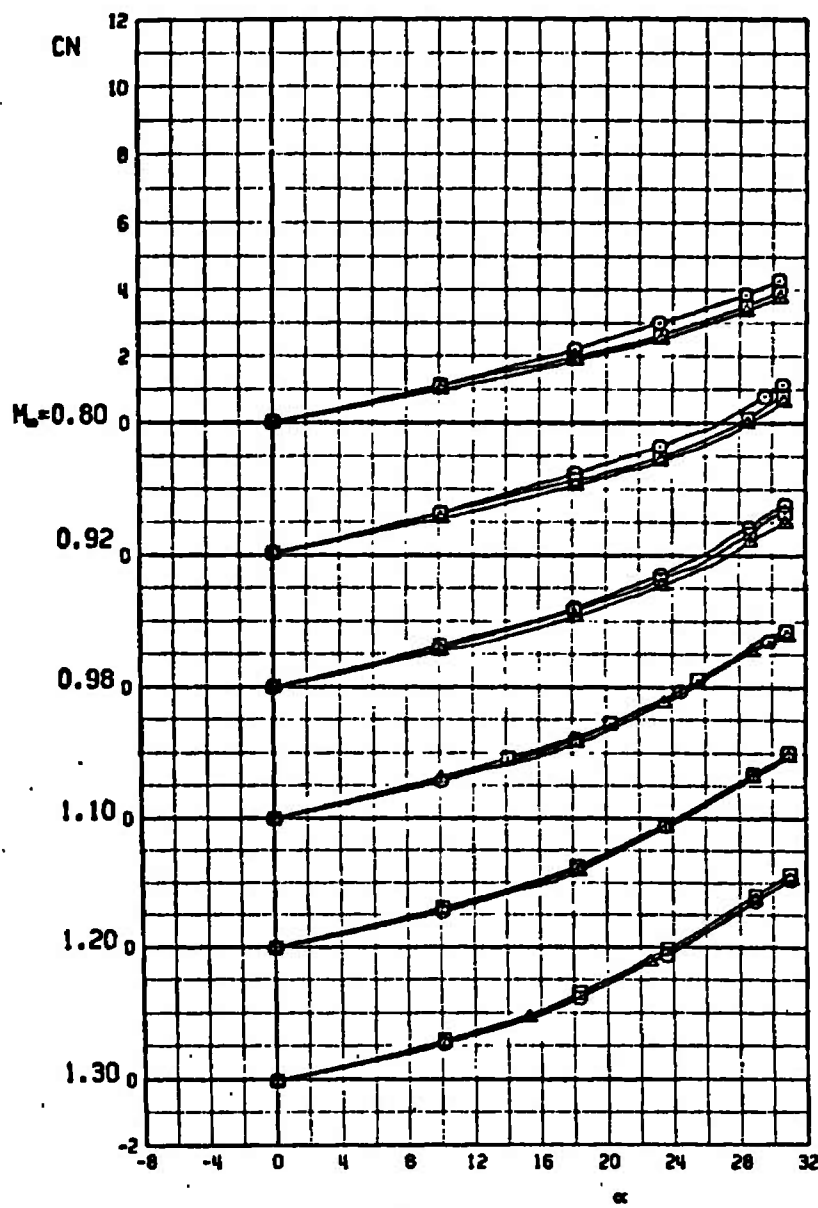


Figure 11. Concluded.

TEST CENTER AEDC TEST 1

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊖	B4W0F22	0	0	0	0	0	0
⊠	B4W0F23	0	0	0	0	0	0
▲	B4W0F21	0	0	0	0	0	0

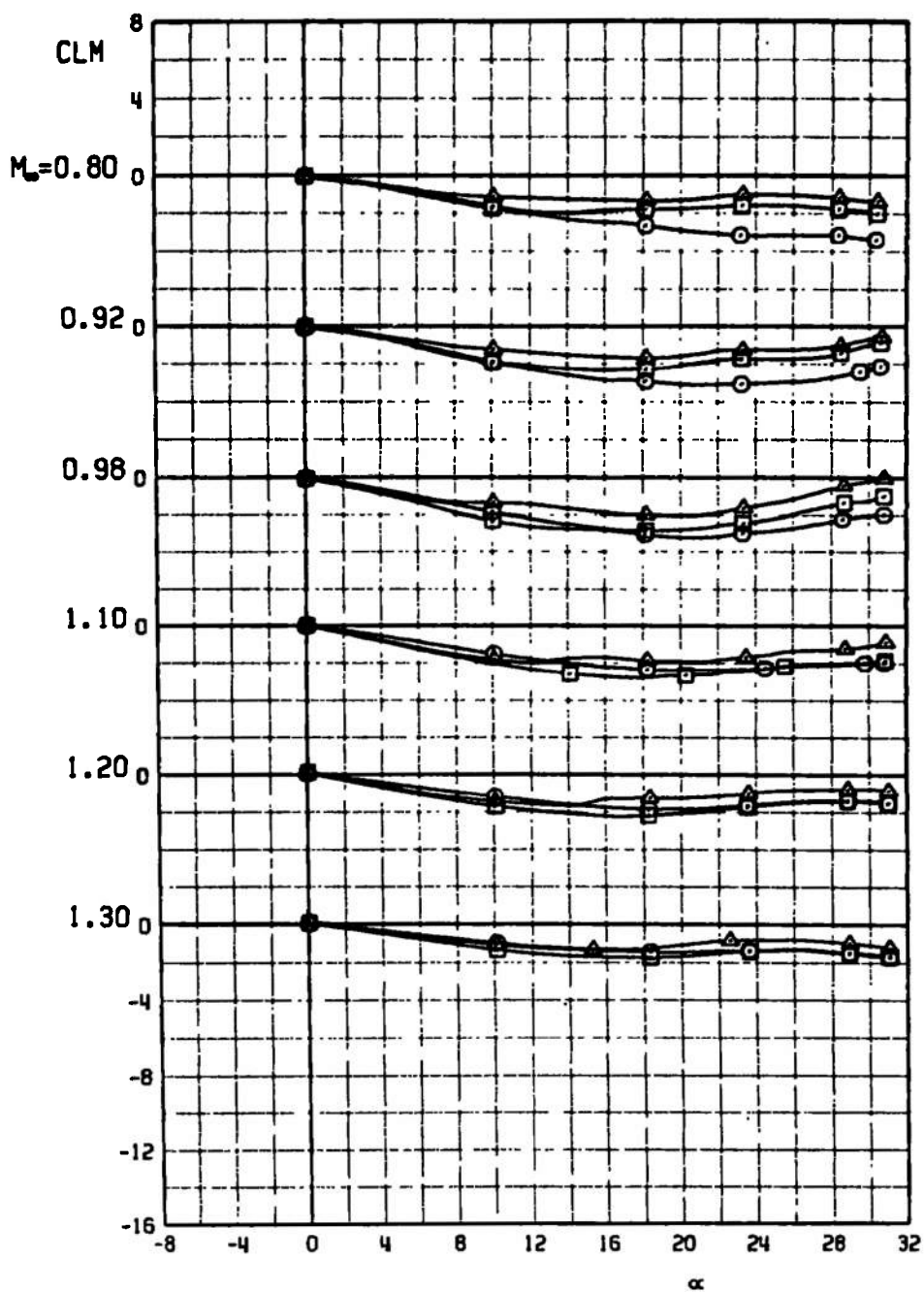


a. CN versus α

Figure 12. Test No. 1, comparison of aerodynamic coefficients of configurations B4W0F22, B4W0F23, and B4W0F21.

TEST CENTER AEDC TEST 1

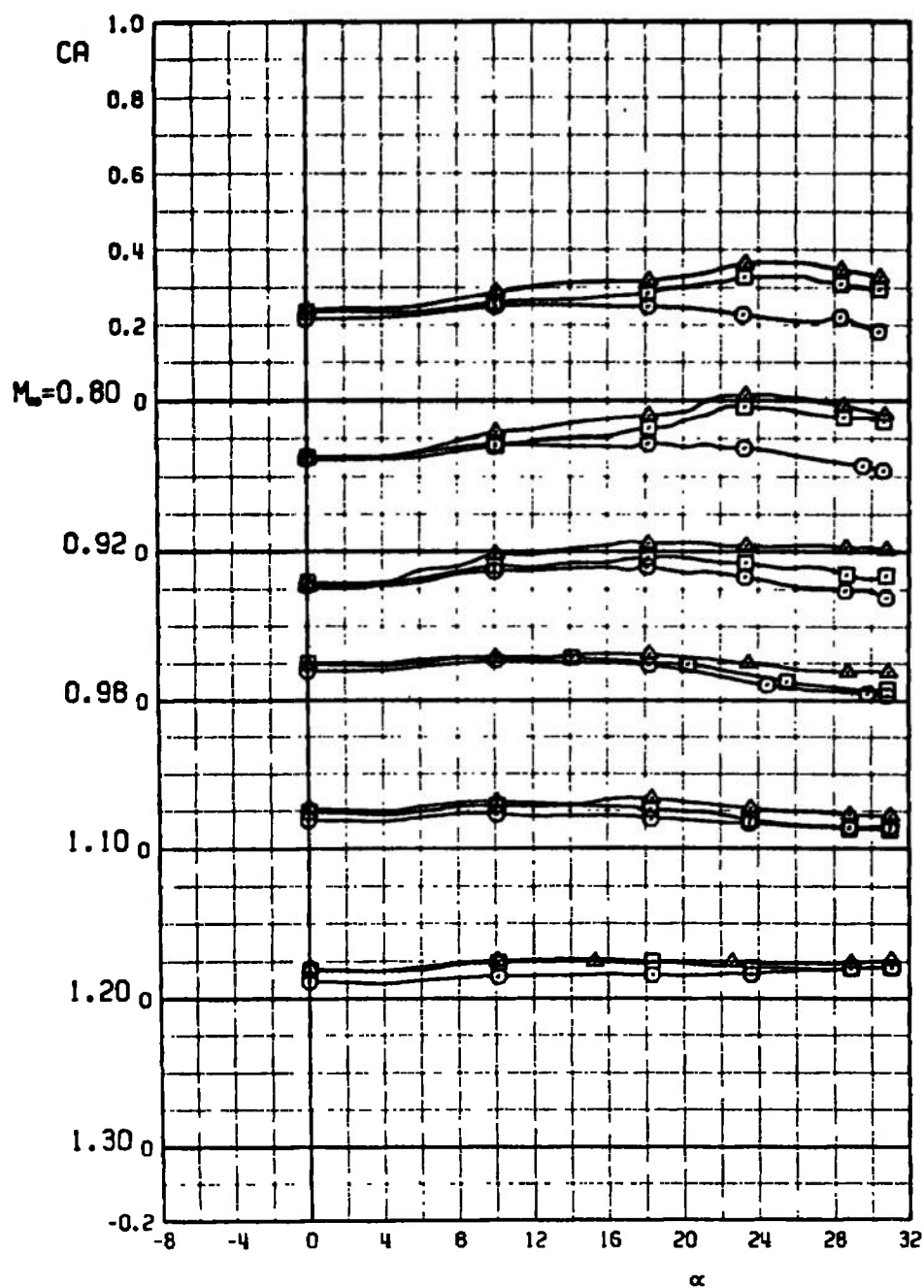
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□	B4WOF23	0	0	0	0	0	0
△	B4WOF21	0	0	0	0	0	0



b. CLM versus α
Figure 12. Continued.

TEST CENTER AEDC TEST 1

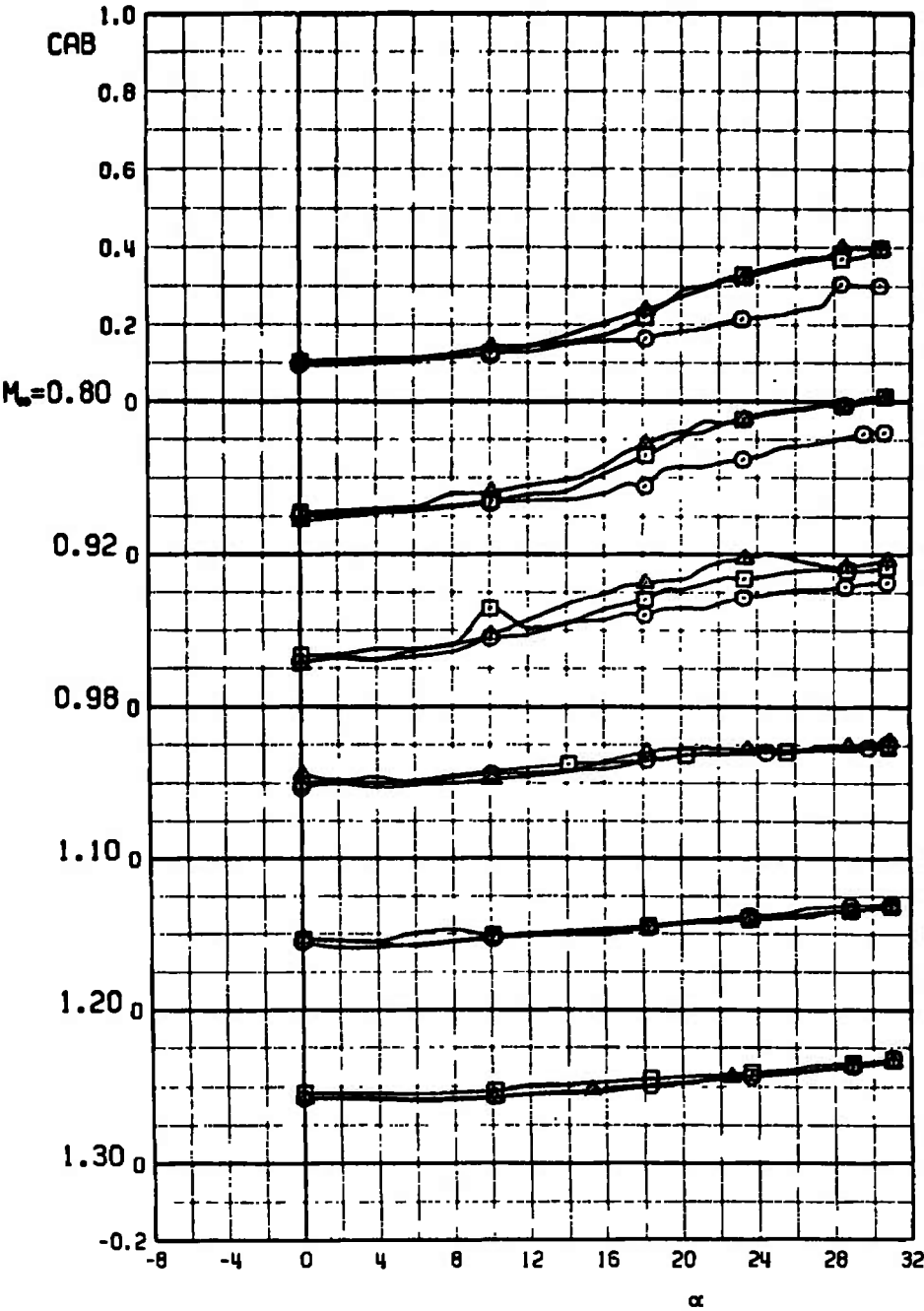
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
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□	B4WOF23	0	0	0	0	0	0
△	B4WOF21	0	0	0	0	0	0



c. CA versus α
Figure 12. Continued.

TEST CENTER AEDC TEST 1

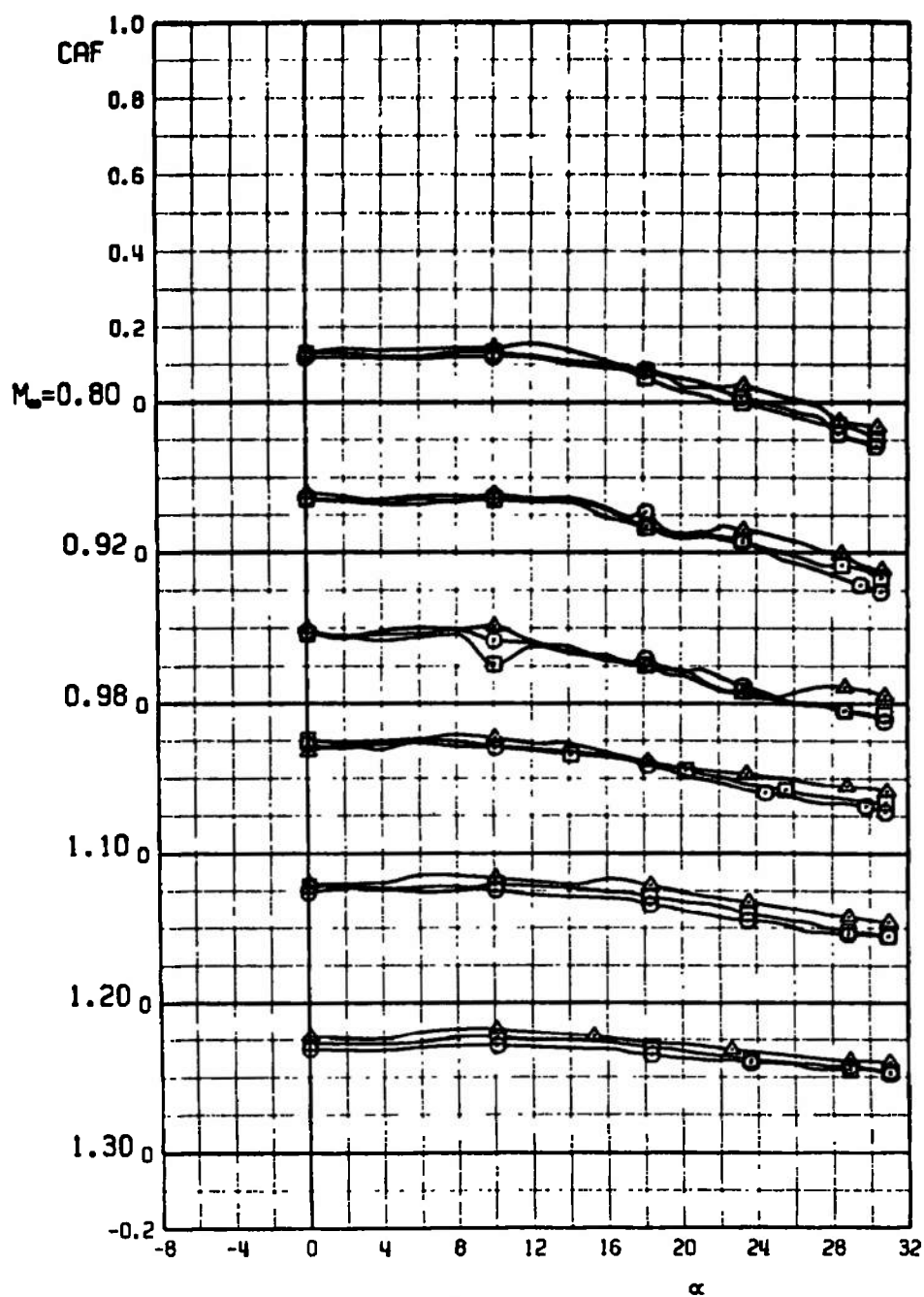
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
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□	B4WOF23	0	0	0	0	0	0
△	B4WOF21	0	0	0	0	0	0



d. CAB versus α
Figure 12. Continued.

TEST CENTER AEDC TEST 1

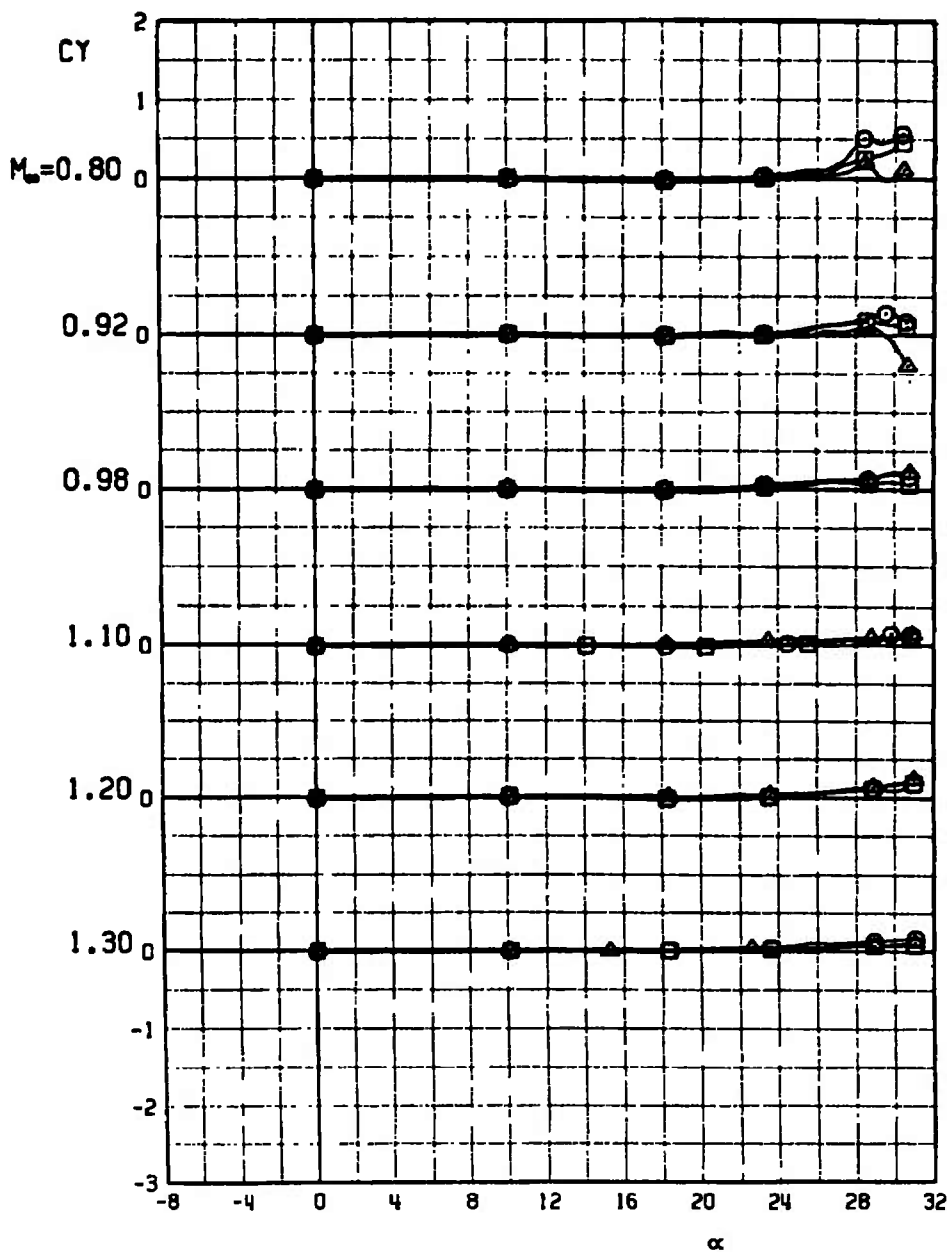
	CONF	L	OEL1	DEL2	DEL3	DEL4	PHI
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□	B4WOF23	0	0	0	0	0	0
△	B4WOF21	0	0	0	0	0	0



e. CAF versus α
Figure 12. Continued.

TEST CENTER AEDC TEST 1

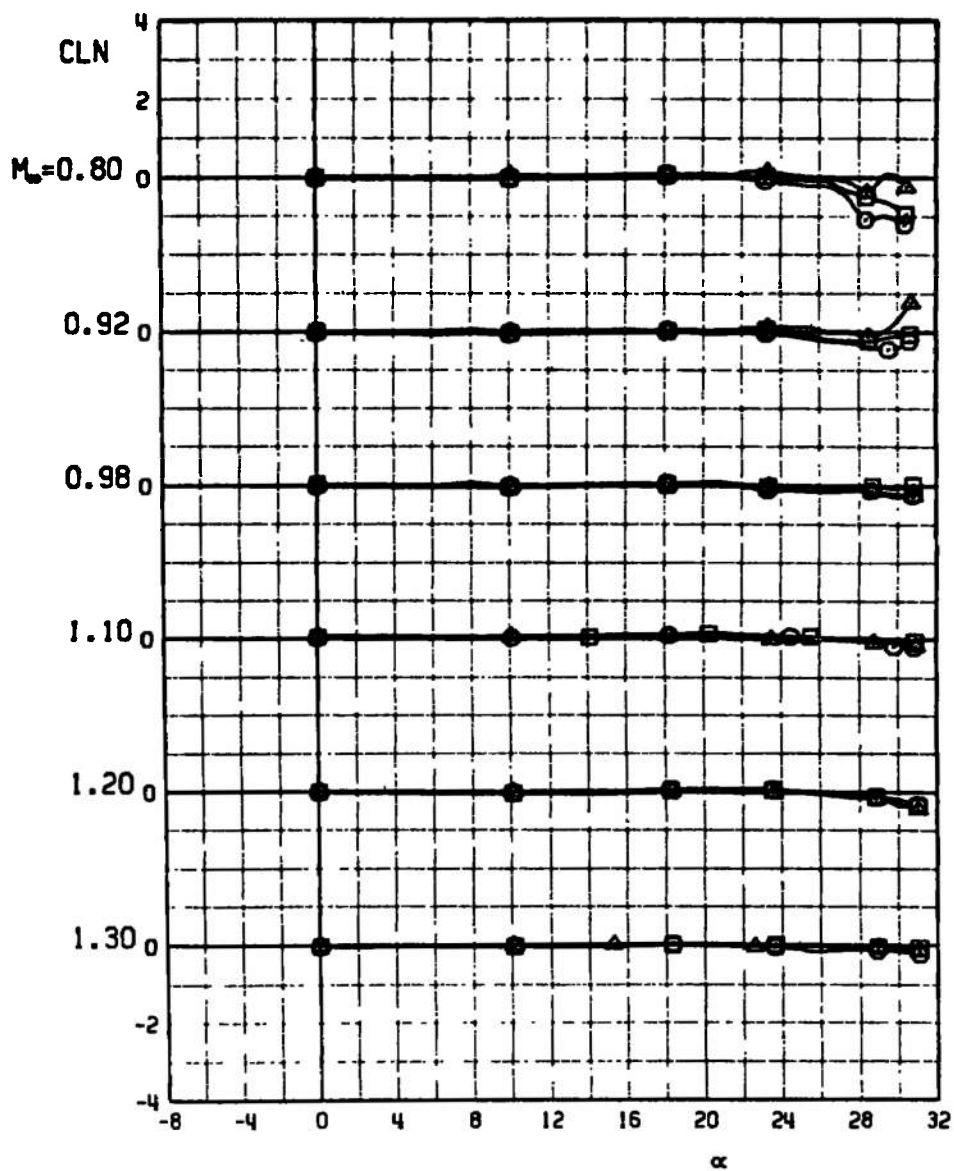
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△	B4WOF21	0	0	0	0	0	0



f. C_Y versus α
Figure 12. Continued.

TEST CENTER AEDC TEST 1

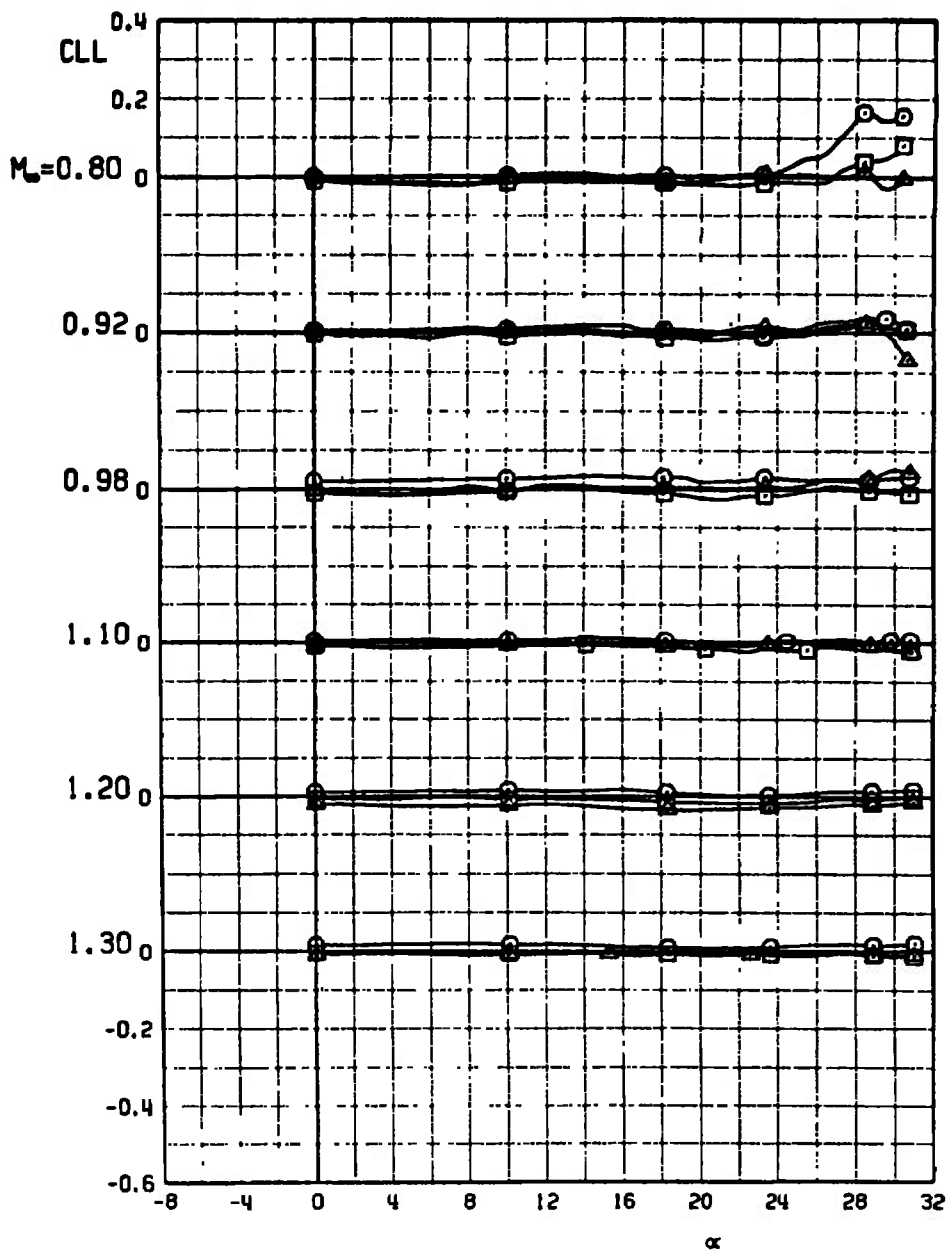
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△	B4WOF21	0	0	0	0	0	0



g. CLN versus α
Figure 12. Continued.

TEST CENTER AEDC TEST 1

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF22	0	0	0	0	0	0
□	B4WOF23	0	0	0	0	0	0
△	B4WOF21	0	0	0	0	0	0



h. CLL versus α
Figure 12. Concluded.

TEST CENTER AEDC TEST 1

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4W0F35	0	0	0	0	0	0
□	B4W0F34	0	0	0	0	0	0
▲	B4W0F33	0	0	0	0	0	0

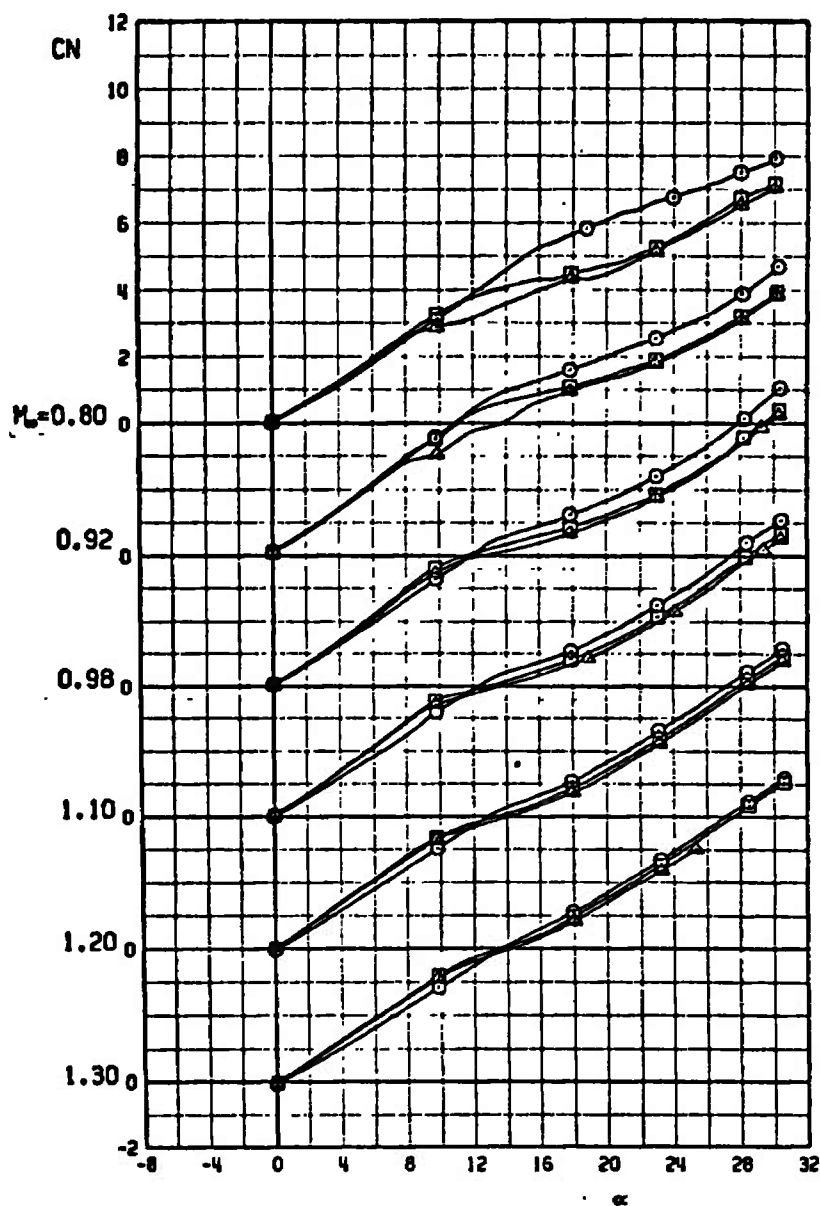
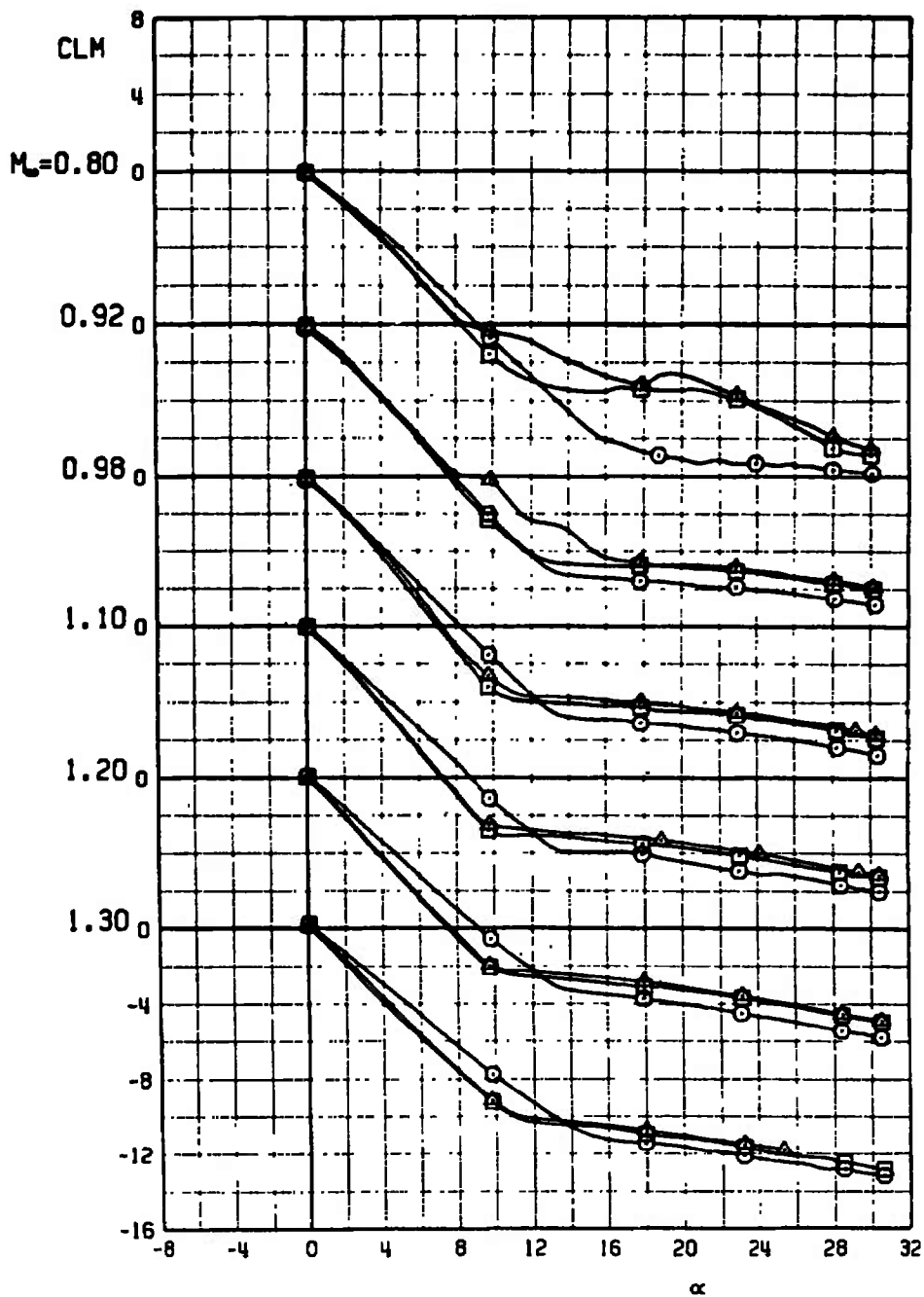
a. CN versus α

Figure 13. Test No. 1, comparison of aerodynamic coefficients of configurations B4W0F35, B4W0F34, and B4W0F33.

TEST CENTER AEOC TEST 1

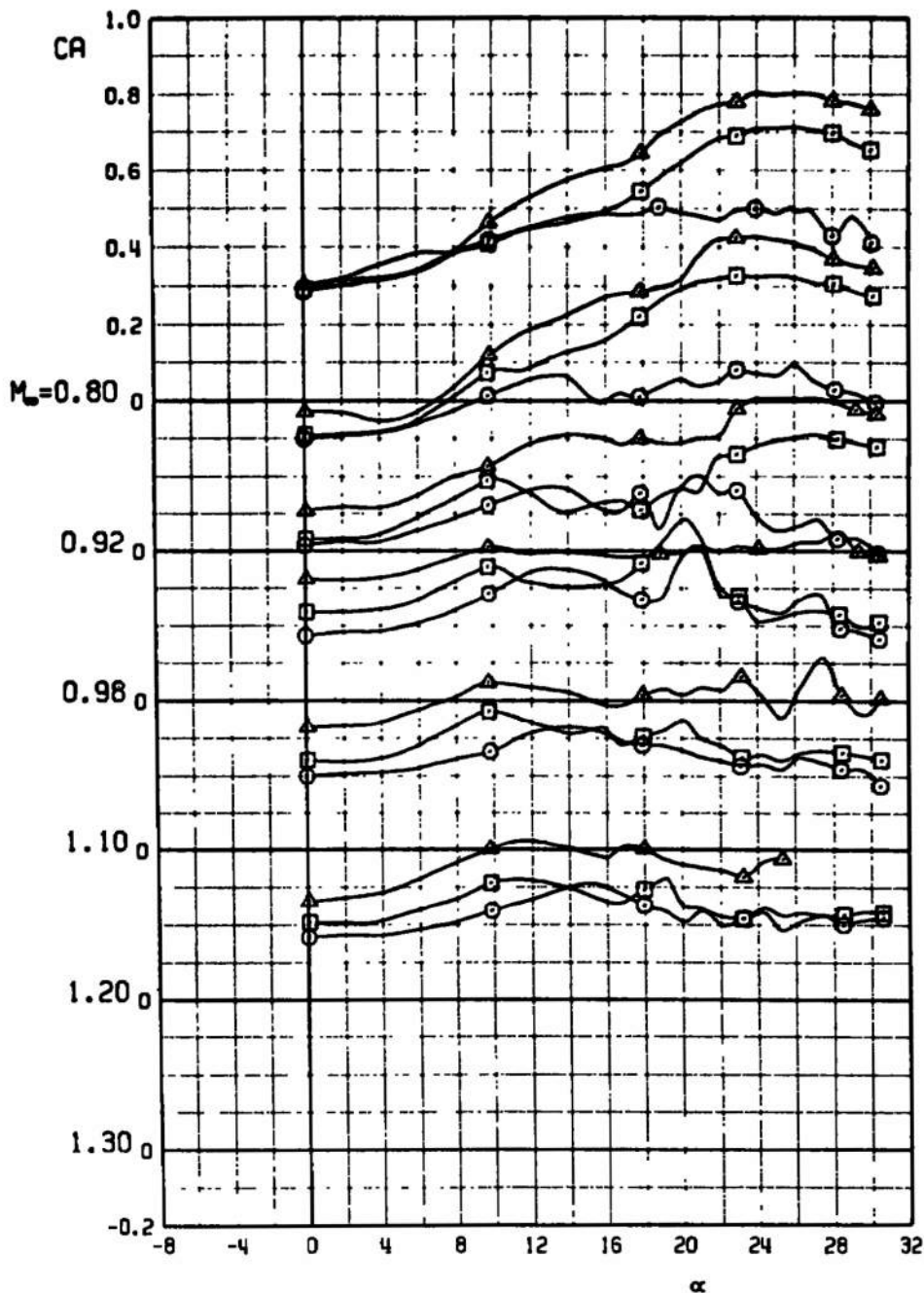
	CONF	L	OEL1	OEL2	OEL3	OEL4	PHI
○	B4WOF35	0	0	0	0	0	0
□	B4WOF34	0	0	0	0	0	0
△	B4WOF33	0	0	0	0	0	0



b. CL_M versus α
Figure 13. Continued.

TEST CENTER AEDC TEST 1

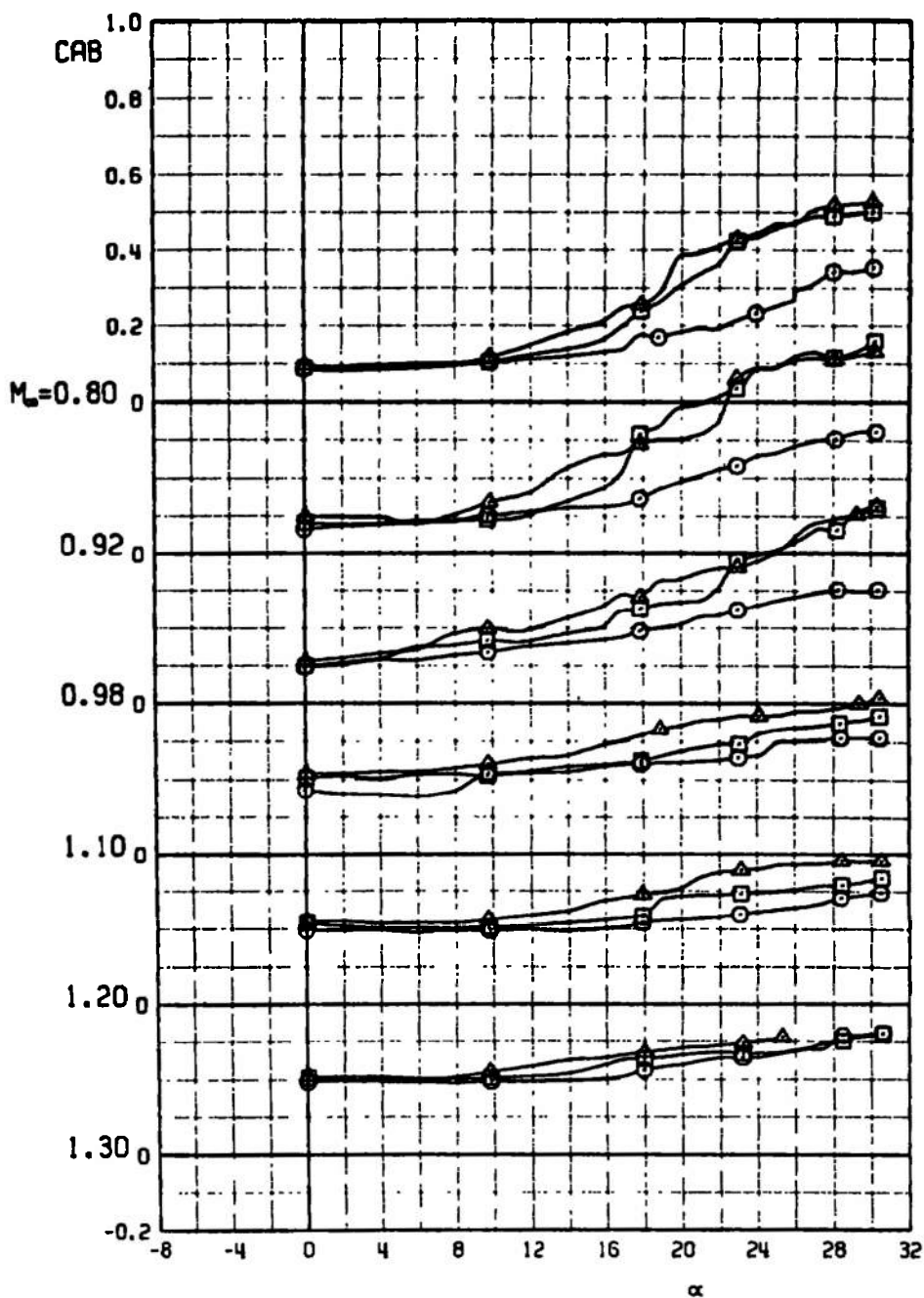
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF35	0	0	0	0	0	0
□	B4WOF34	0	0	0	0	0	0
△	B4WOF33	0	0	0	0	0	0



c. CA versus α
Figure 13. Continued.

TEST CENTER AEDC TEST 1

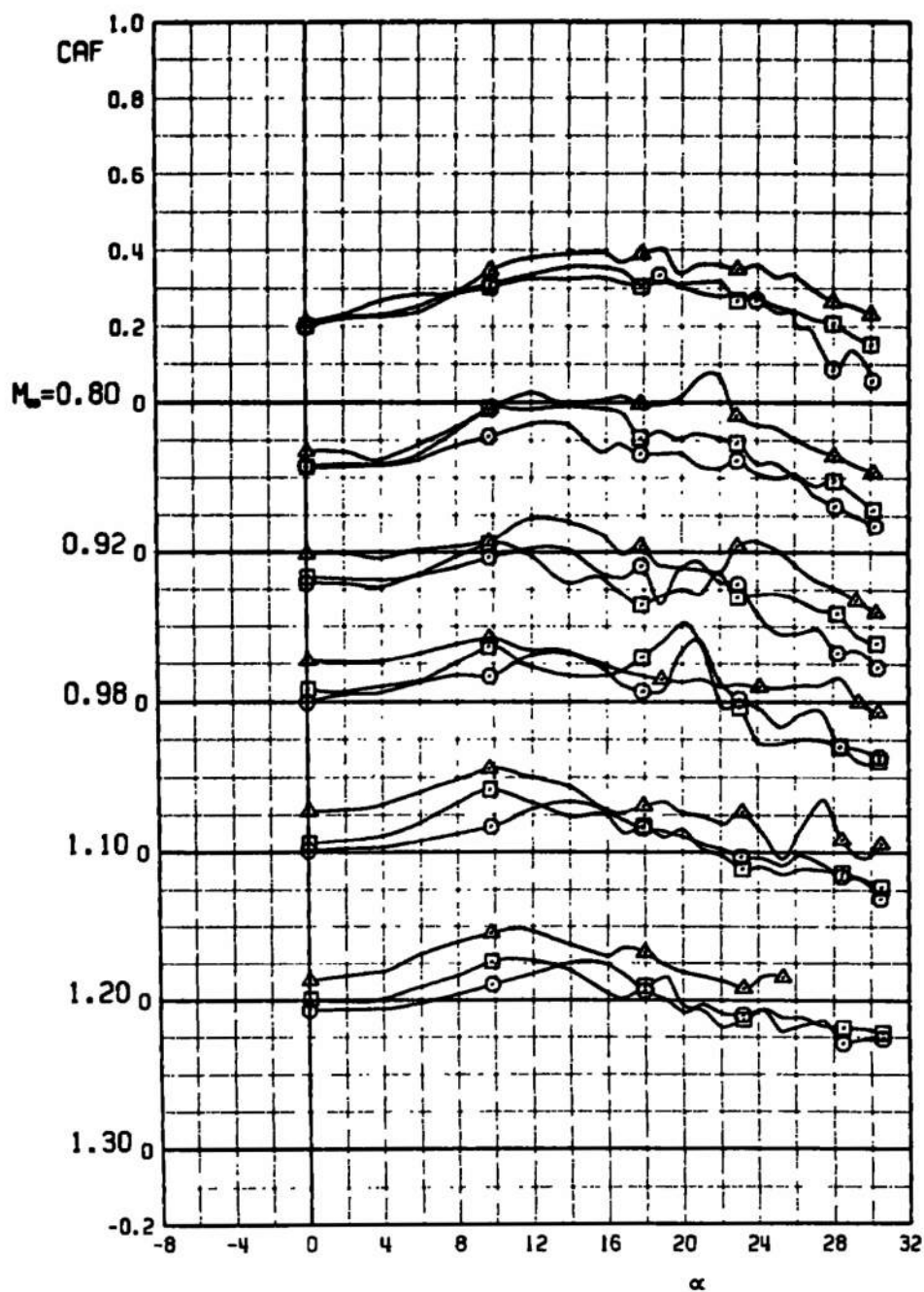
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF35	0	0	0	0	0	0
□	B4WOF34	0	0	0	0	0	0
△	B4WOF33	0	0	0	0	0	0



d. CAB versus α
Figure 13. Continued.

TEST CENTER AEDC TEST 1

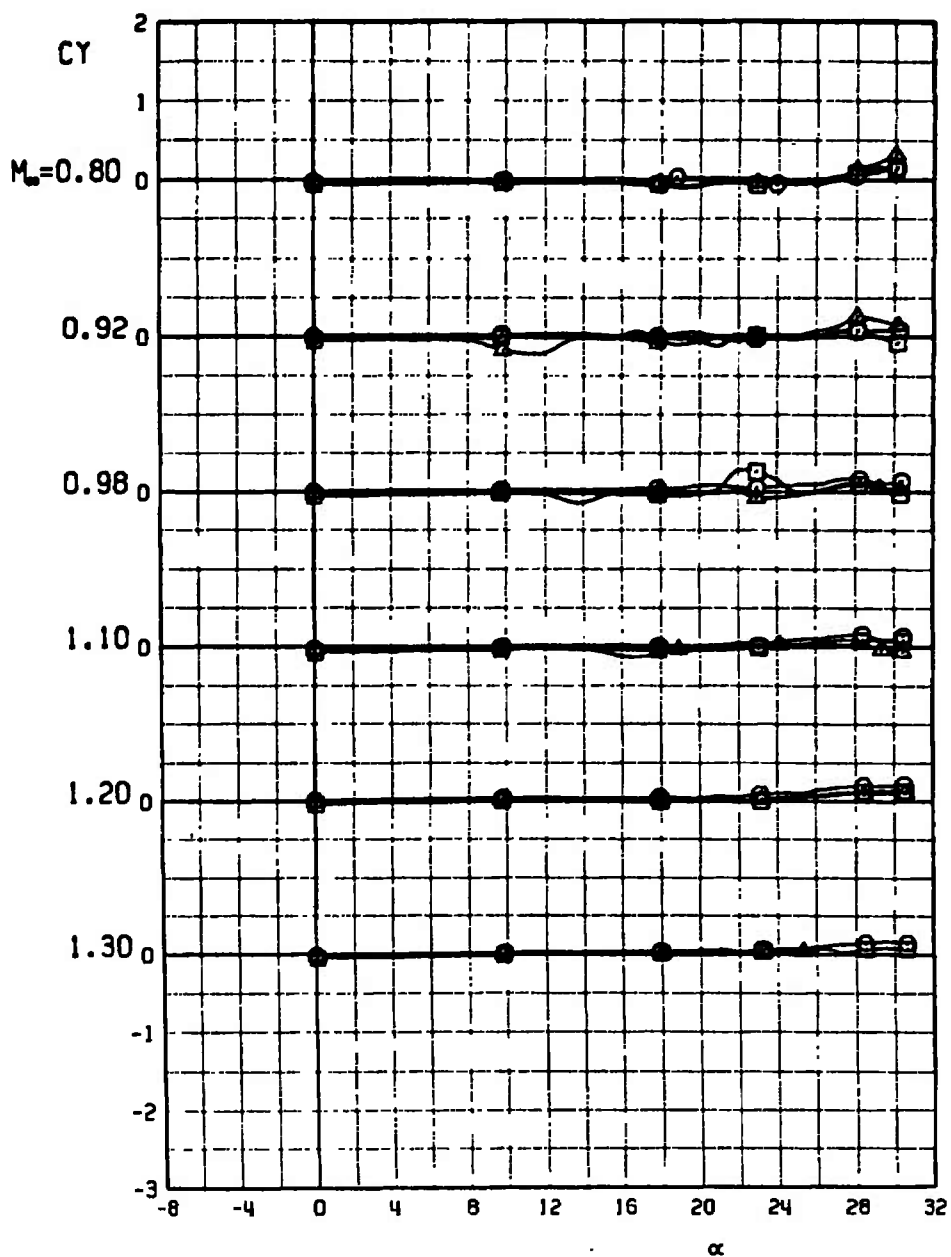
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF35	0	0	0	0	0	0
□	B4WOF34	0	0	0	0	0	0
△	B4WOF33	0	0	0	0	0	0



e. CAF versus α
Figure 13. Continued.

TEST CENTER AEDC TEST 1

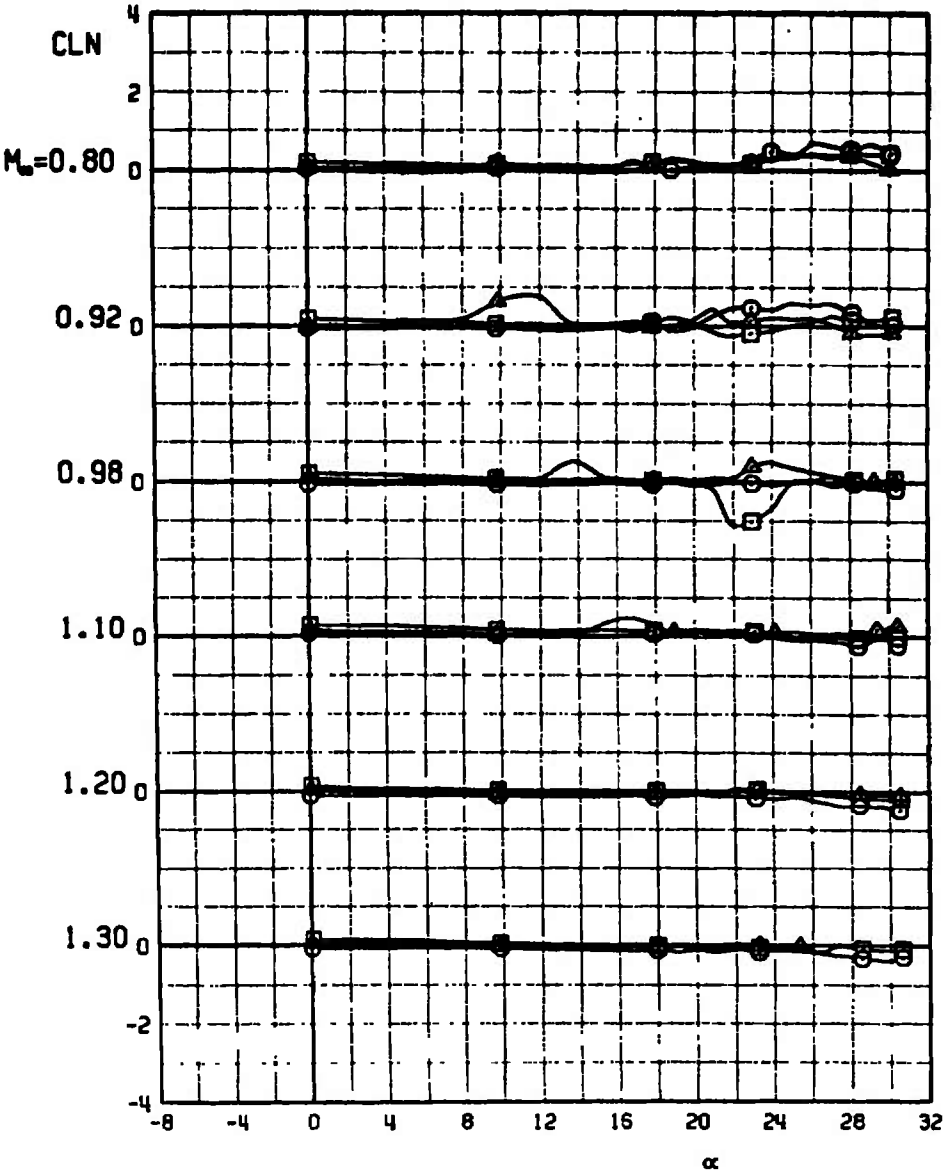
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF35	0	0	0	0	0	0
□	B4WOF34	0	0	0	0	0	0
△	B4WOF33	0	0	0	0	0	0



f. CY versus α
Figure 13. Continued.

TEST CENTER AEDC TEST 1

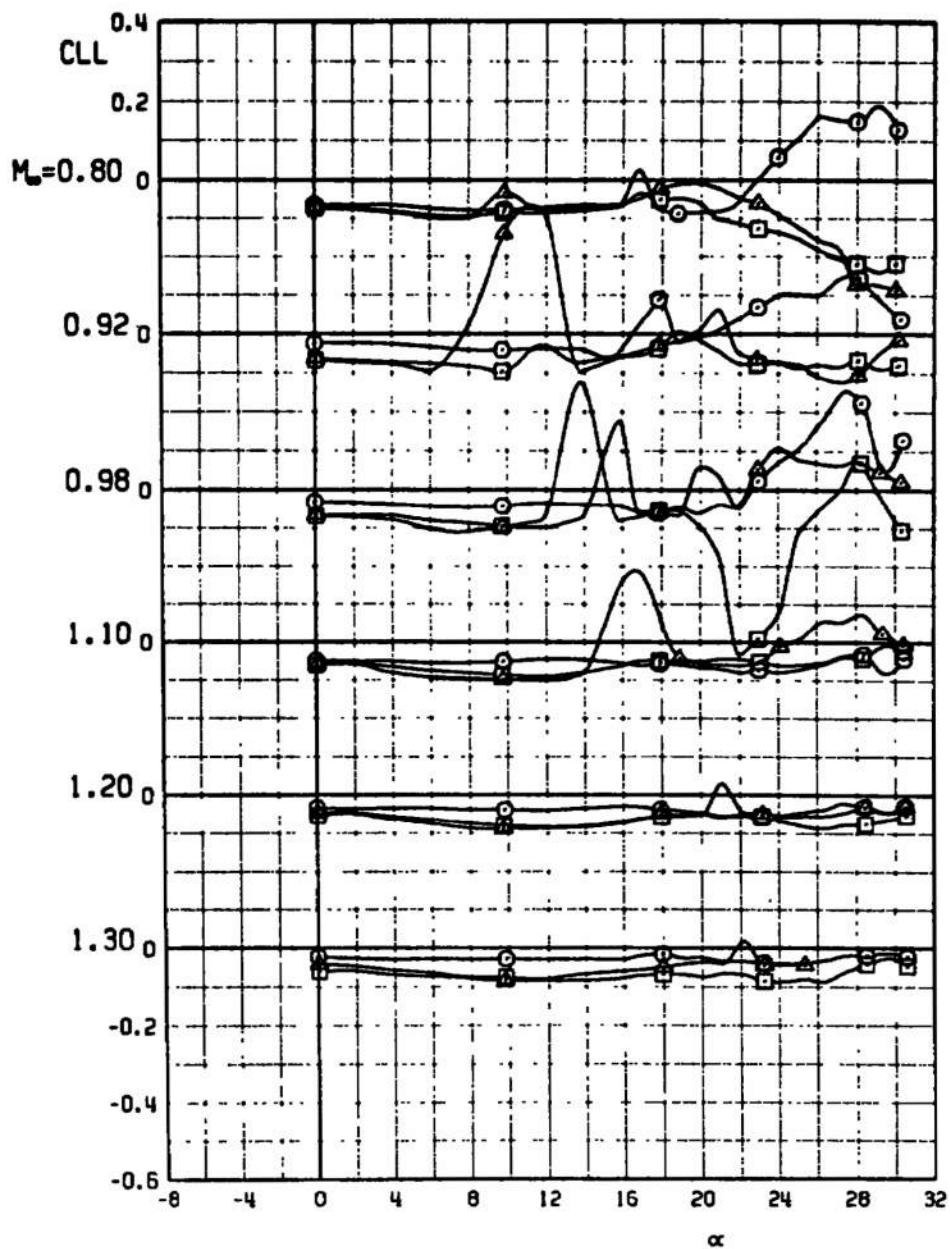
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B4WOF35	0	0	0	0	0	0
⊠	B4WOF34	0	0	0	0	0	0
△	B4WOF33	0	0	0	0	0	0



g. CL_N versus α
Figure 13. Continued.

TEST CENTER AEDC TEST 1

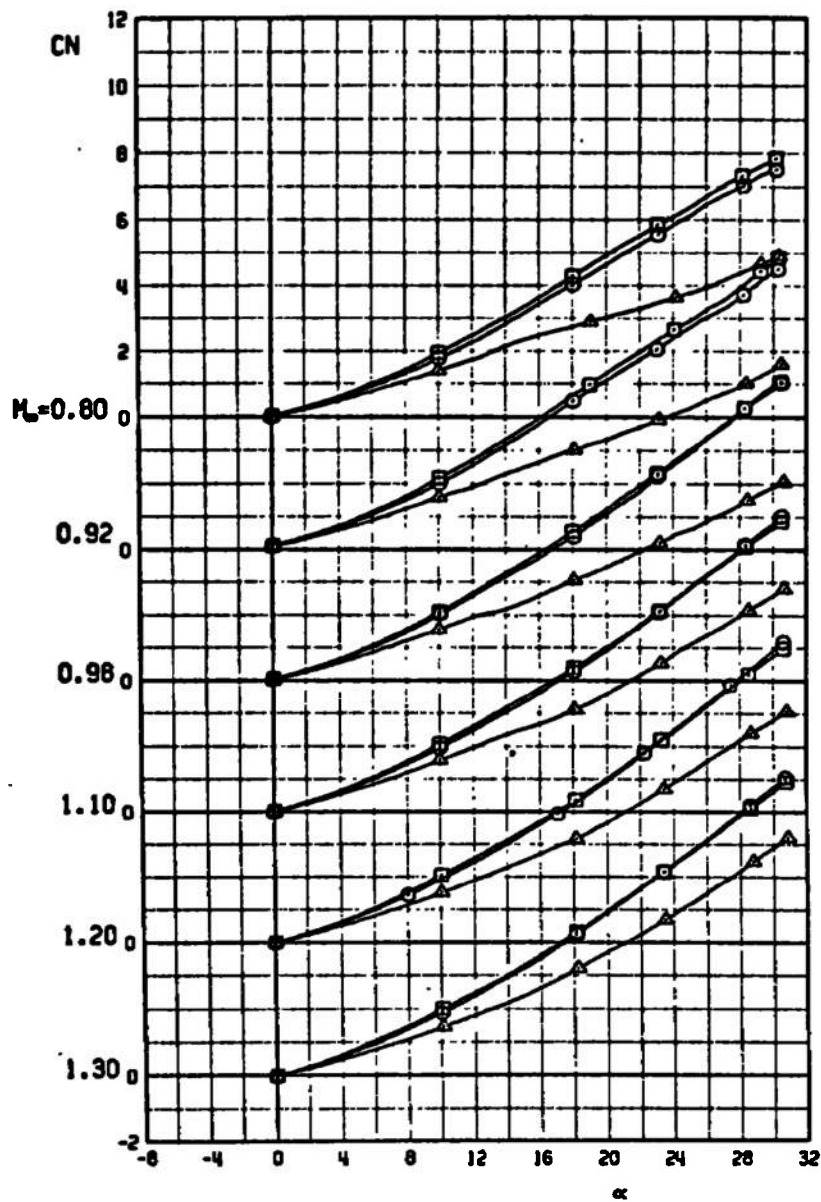
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF35	0	0	0	0	0	0
□	B4WOF34	0	0	0	0	0	0
△	B4WOF33	0	0	0	0	0	0



h. CLL versus α
Figure 13. Concluded.

TEST CENTER AEDC TEST 1

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF32	0	0	0	0	0	0
□	B4WOF31	0	0	0	0	0	0
▲	B4WOF11	0	0	0	0	0	0

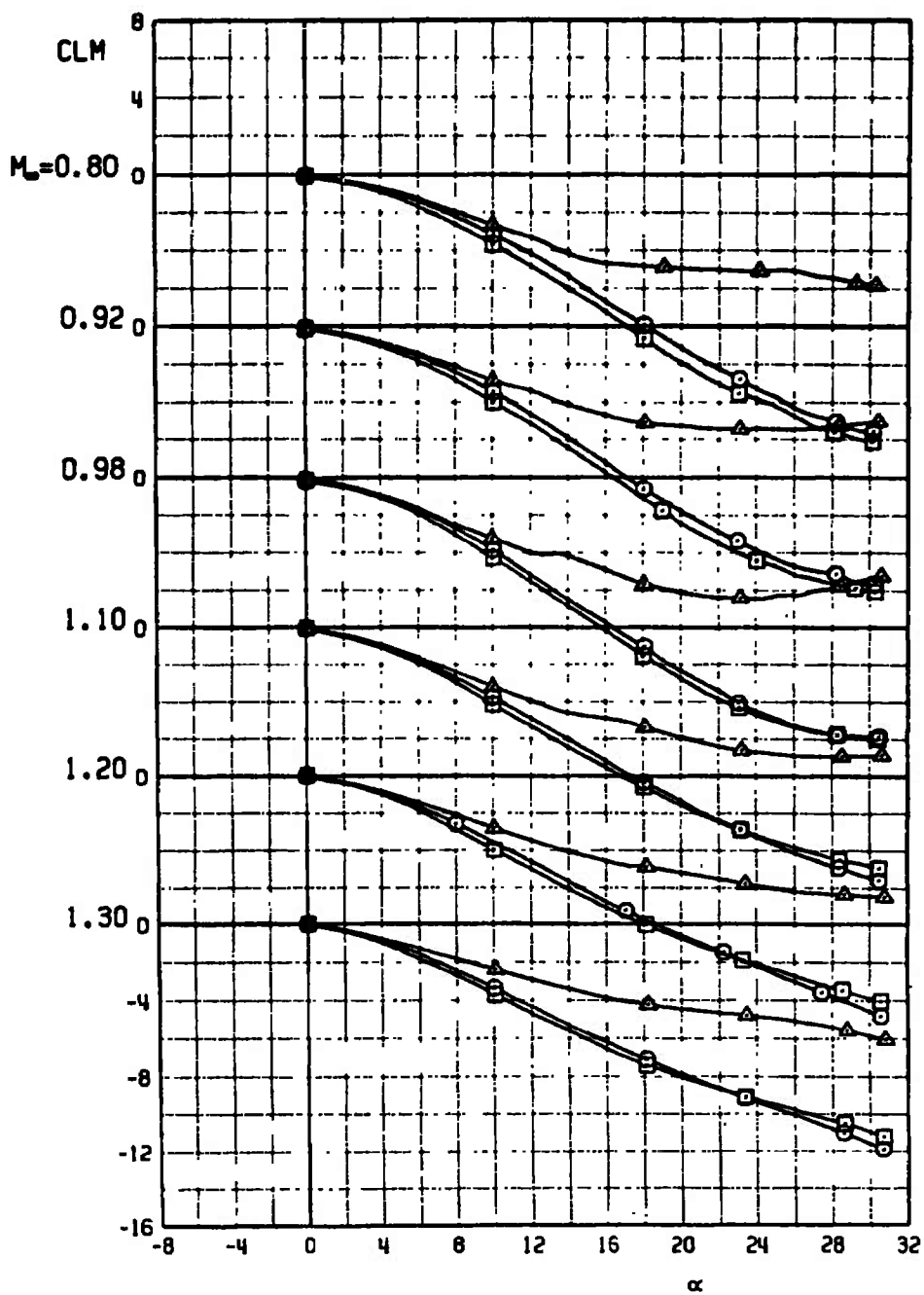


a. CN versus α

Figure 14. Test No. 1, comparison of aerodynamic coefficients of configurations B4WOF32, B4WOF31, and B4WOF11.

TEST CENTER AEOC TEST 1

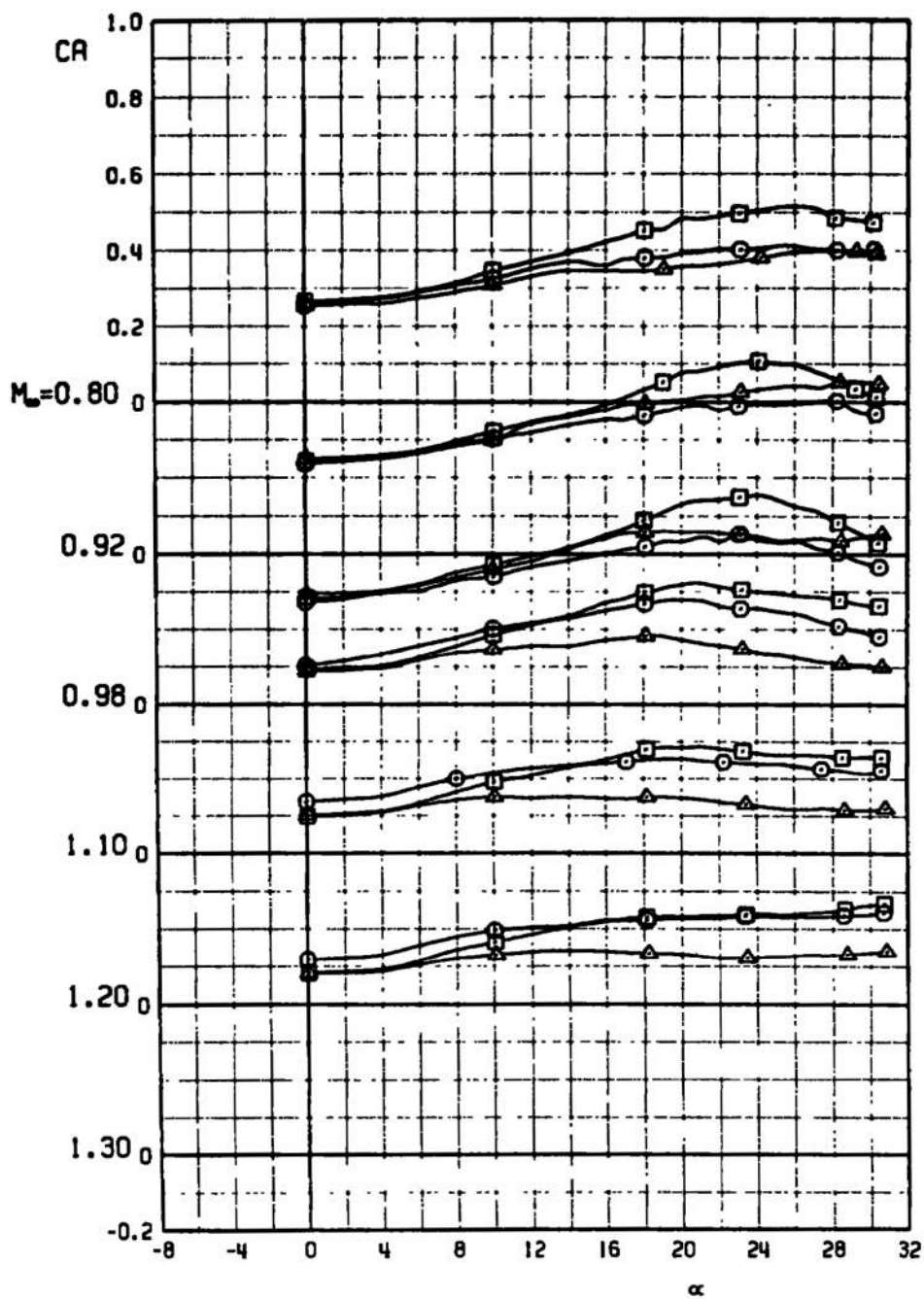
	CONF	L	OEL1	OEL2	DEL3	DEL4	PHI
○	B4WOF32	0	0	0	0	0	0
□	B4WOF31	0	0	0	0	0	0
△	B4WOF11	0	0	0	0	0	0



b. CLM versus α
Figure 14. Continued.

TEST CENTER AEDC TEST 1

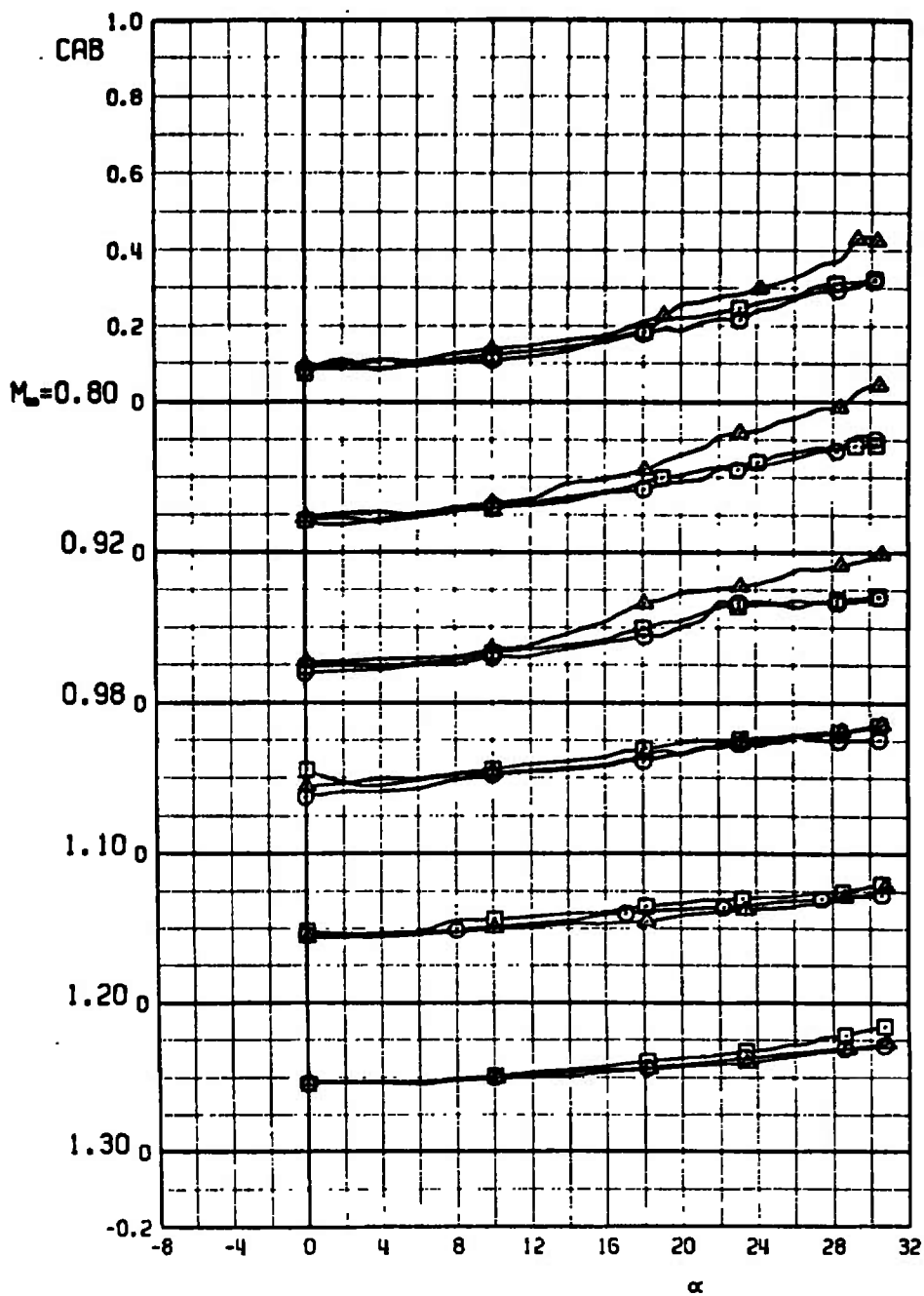
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF32	0	0	0	0	0	0
□	B4WOF31	0	0	0	0	0	0
△	B4WOF11	0	0	0	0	0	0



c. C_D versus α
Figure 14. Continued.

TEST CENTER AEDC TEST 1

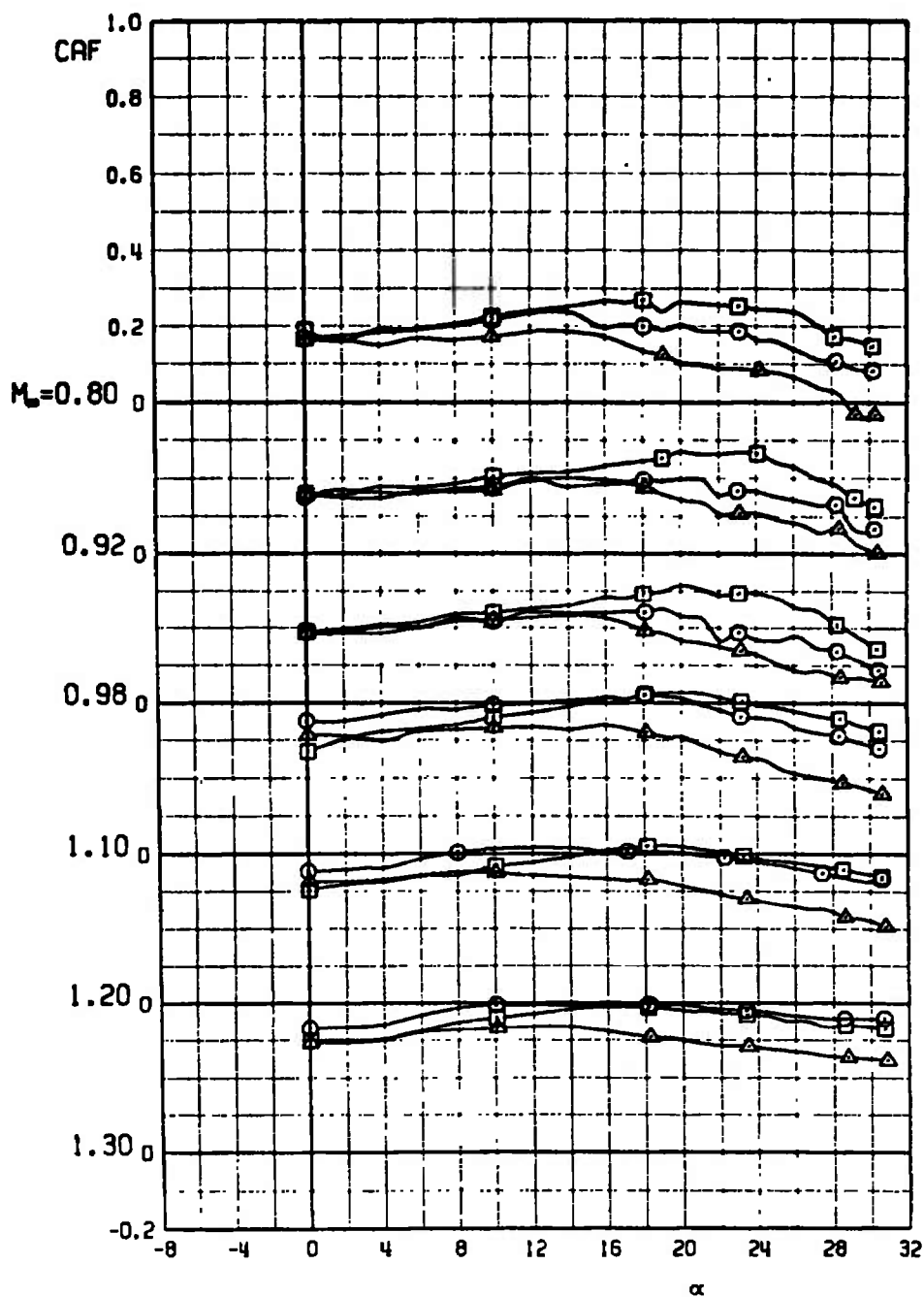
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF32	0	0	0	0	0	0
□	B4WOF31	0	0	0	0	0	0
△	B4WOF11	0	0	0	0	0	0



d. CAB versus α
Figure 14. Continued.

TEST CENTER AEDC TEST 1

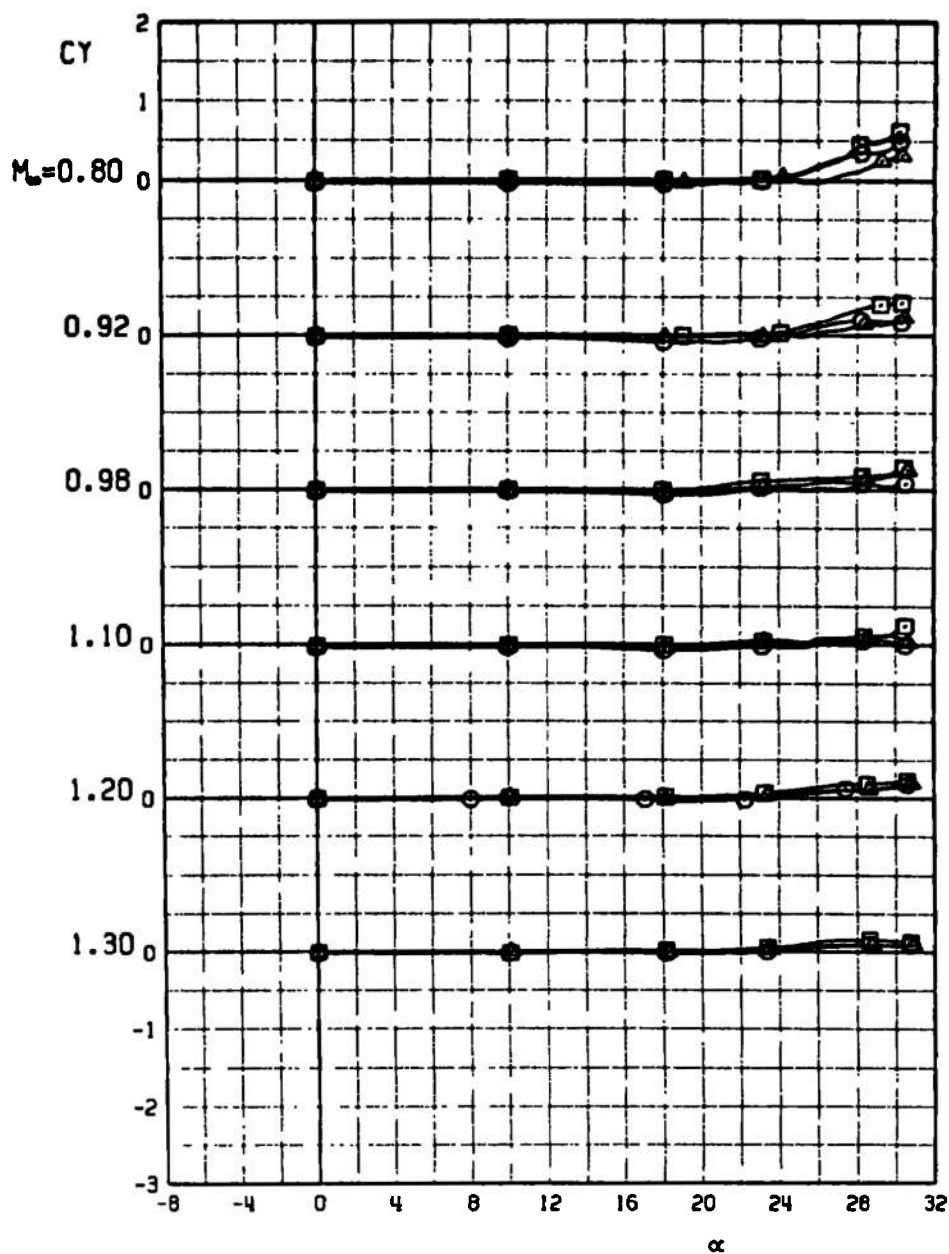
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF32	0	0	0	0	0	0
□	B4WOF31	0	0	0	0	0	0
△	B4WOF11	0	0	0	0	0	0



e. CAF versus α
Figure 14. Continued.

TEST CENTER AEDC TEST 1

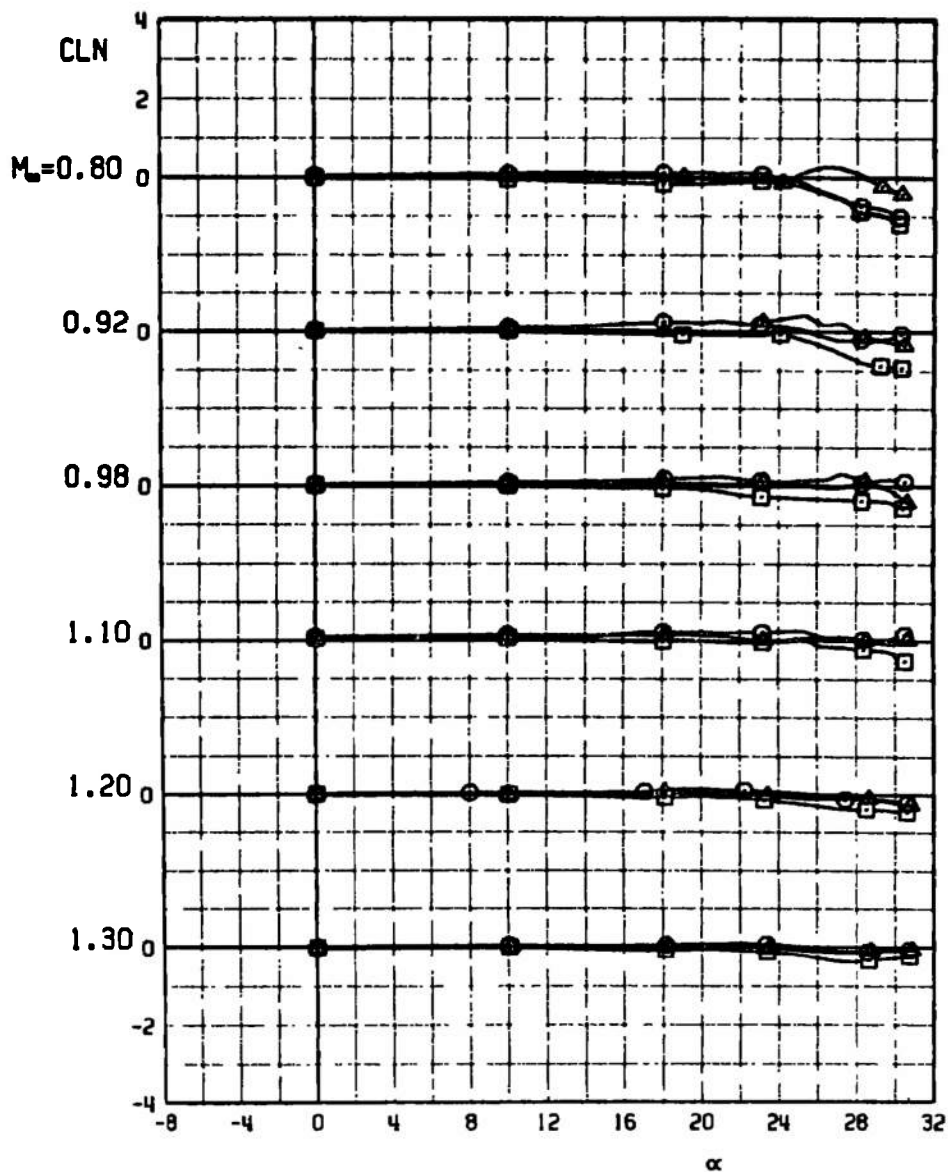
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF32	0	0	0	0	0	0
□	B4WOF31	0	0	0	0	0	0
△	B4WOF11	0	0	0	0	0	0



f. C_Y versus α
Figure 14. Continued.

TEST CENTER AEDC TEST 1

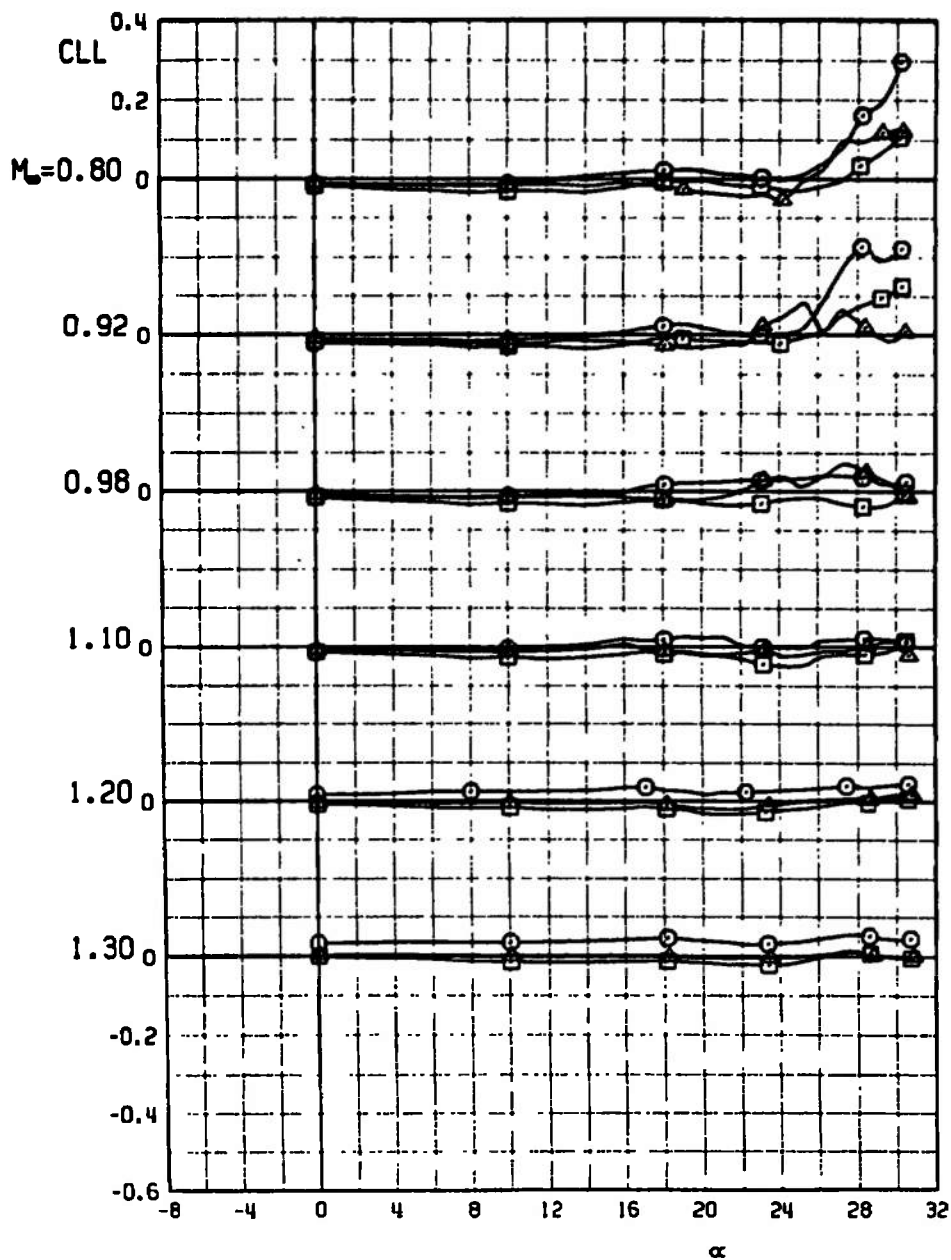
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF32	0	0	0	0	0	0
□	B4WOF31	0	0	0	0	0	0
△	B4WOF11	0	0	0	0	0	0



g. CL_N versus α
Figure 14. Continued.

TEST CENTER AEDC TEST 1

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B4WOF32	0	0	0	0	0	0
□	B4WOF31	0	0	0	0	0	0
△	B4WOF11	0	0	0	0	0	0



h. CLL versus α
Figure 14. Concluded.

TEST CENTER AEDC TEST 1

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W0F0	0	OFF	OFF	OFF	OFF	0
□	B5W0F0	0	OFF	OFF	OFF	OFF	0
△	B4W0F0	0	OFF	OFF	OFF	OFF	0

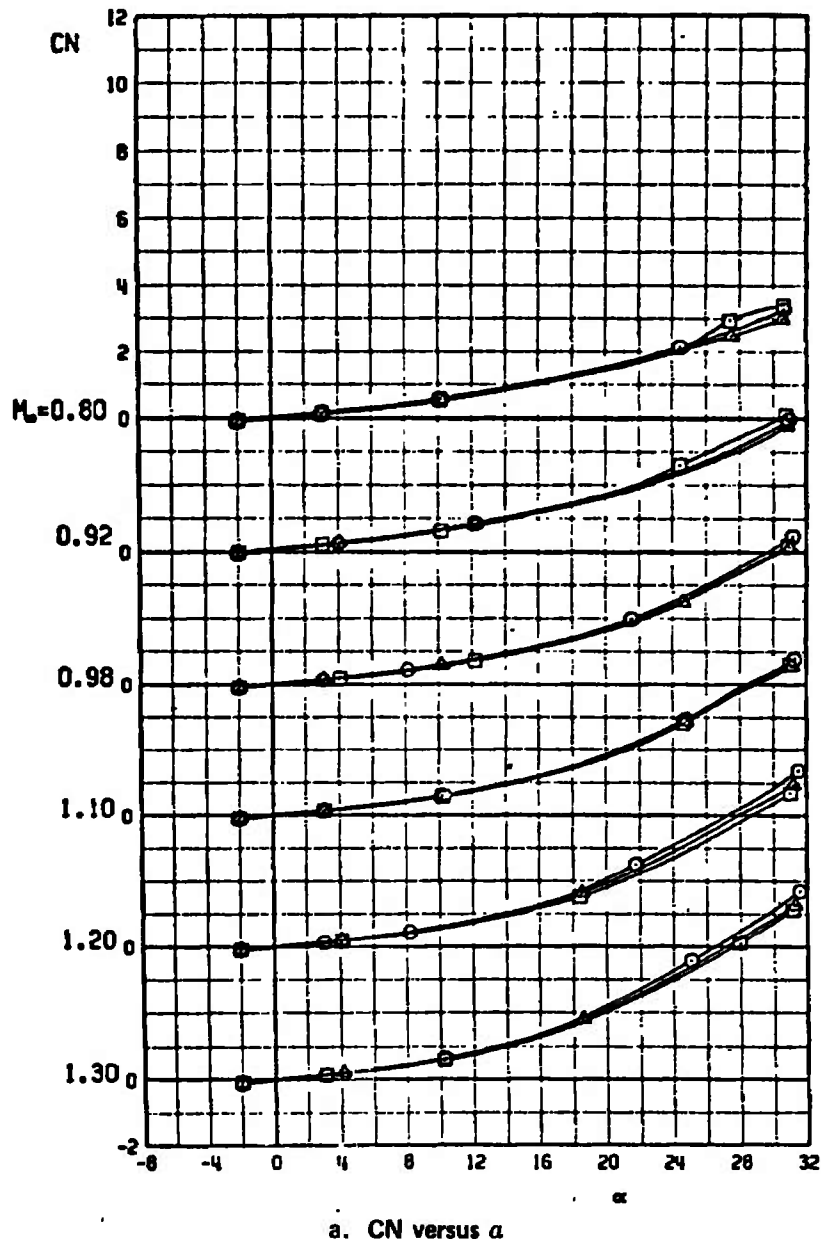
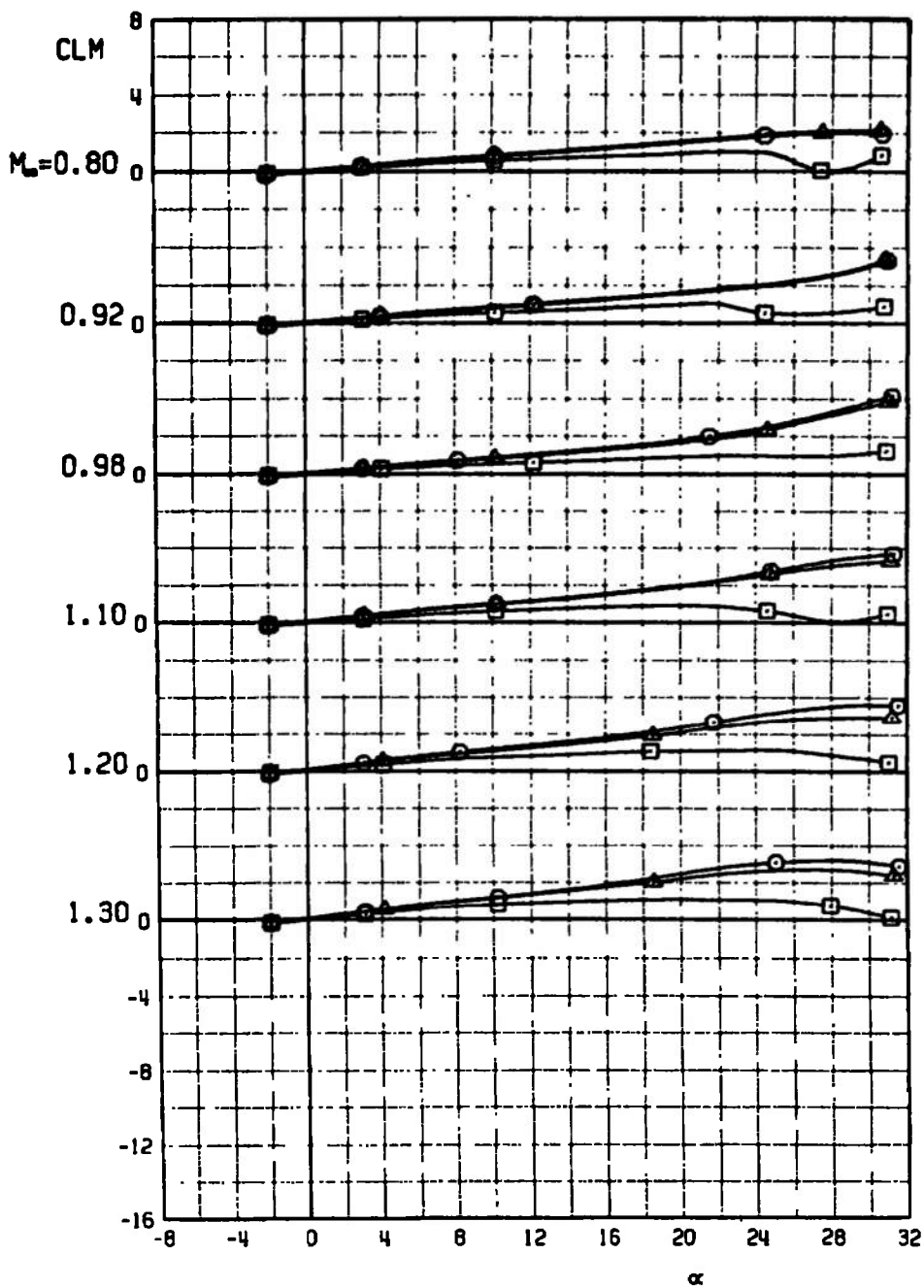
a. C_N versus α

Figure 15. Test No. 1, comparison of aerodynamic coefficients of configurations B2W0F0, B5W0F0, and B4W0F0.

TEST CENTER AEDC TEST 1

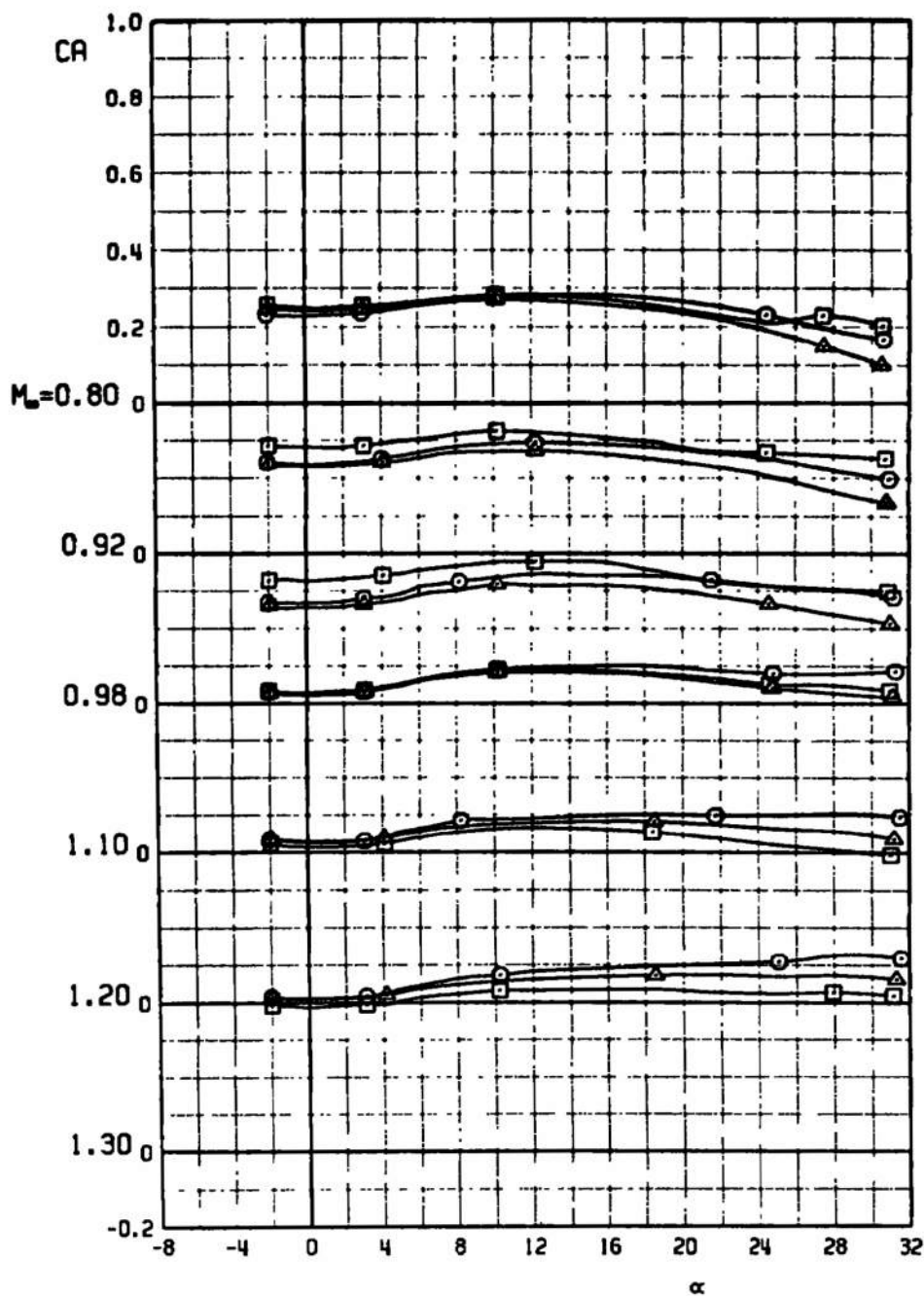
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOFO	0	OFF	OFF	OFF	OFF	0
□	B5WOFO	0	OFF	OFF	OFF	OFF	0
△	B4WOFO	0	OFF	OFF	OFF	OFF	0



b. CLM versus α
Figure 15. Continued.

TEST CENTER AEDC TEST 1

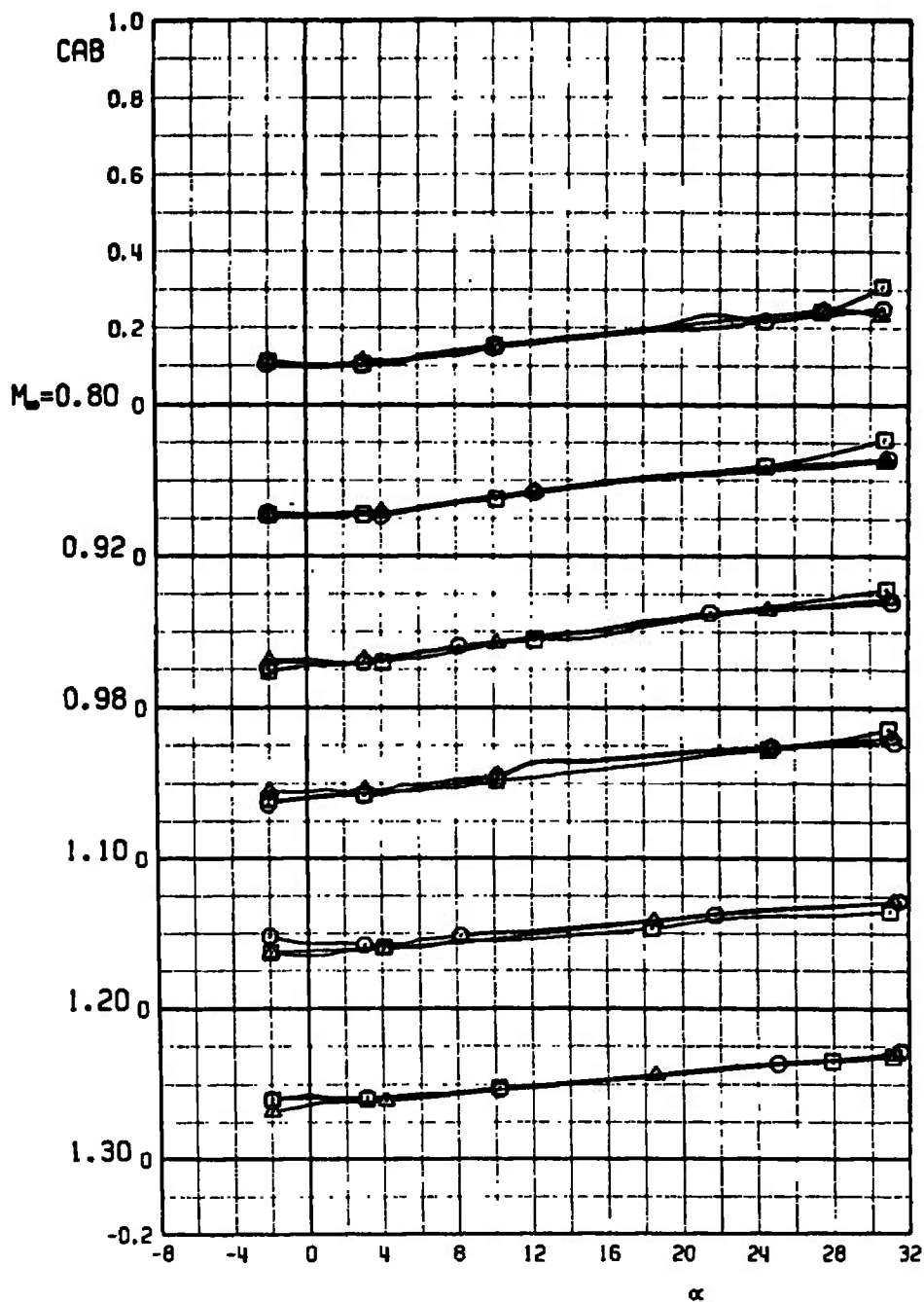
	CONF	L	DEL1	DEL2	DEL3	DEL4	PH1
○	B2W0F0	0	OFF	OFF	OFF	OFF	0
□	B5W0F0	0	OFF	OFF	OFF	OFF	0
△	B4W0F0	0	OFF	OFF	OFF	OFF	0



c. CA versus α
Figure 15. Continued.

TEST CENTER AEDC TEST 1

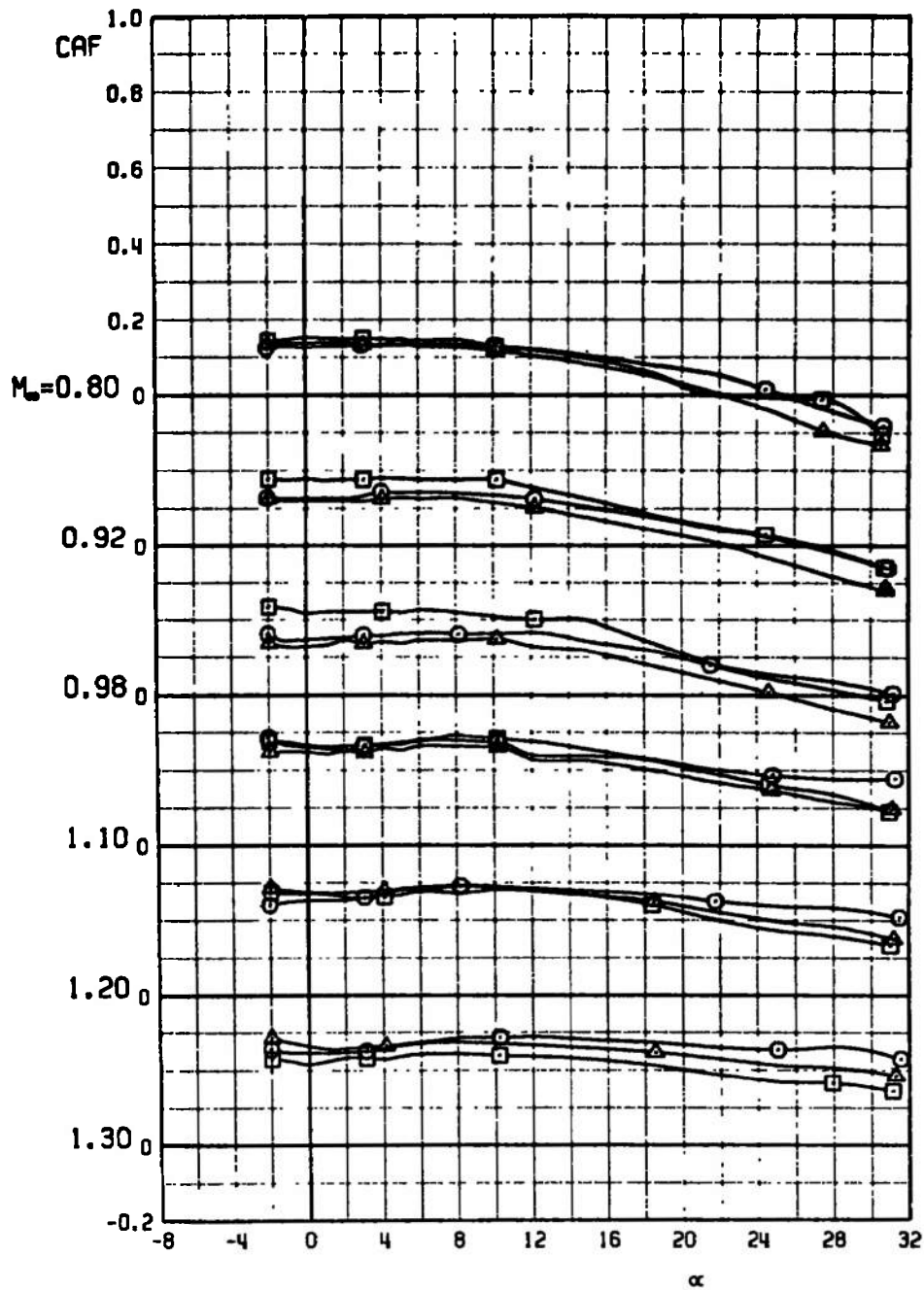
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOFO	0	OFF	OFF	OFF	OFF	0
□	B5WOFO	0	OFF	OFF	OFF	OFF	0
△	B4WOFO	0	OFF	OFF	OFF	OFF	0



d. CAB versus α
Figure 15. Continued.

TEST CENTER AEDC TEST 1

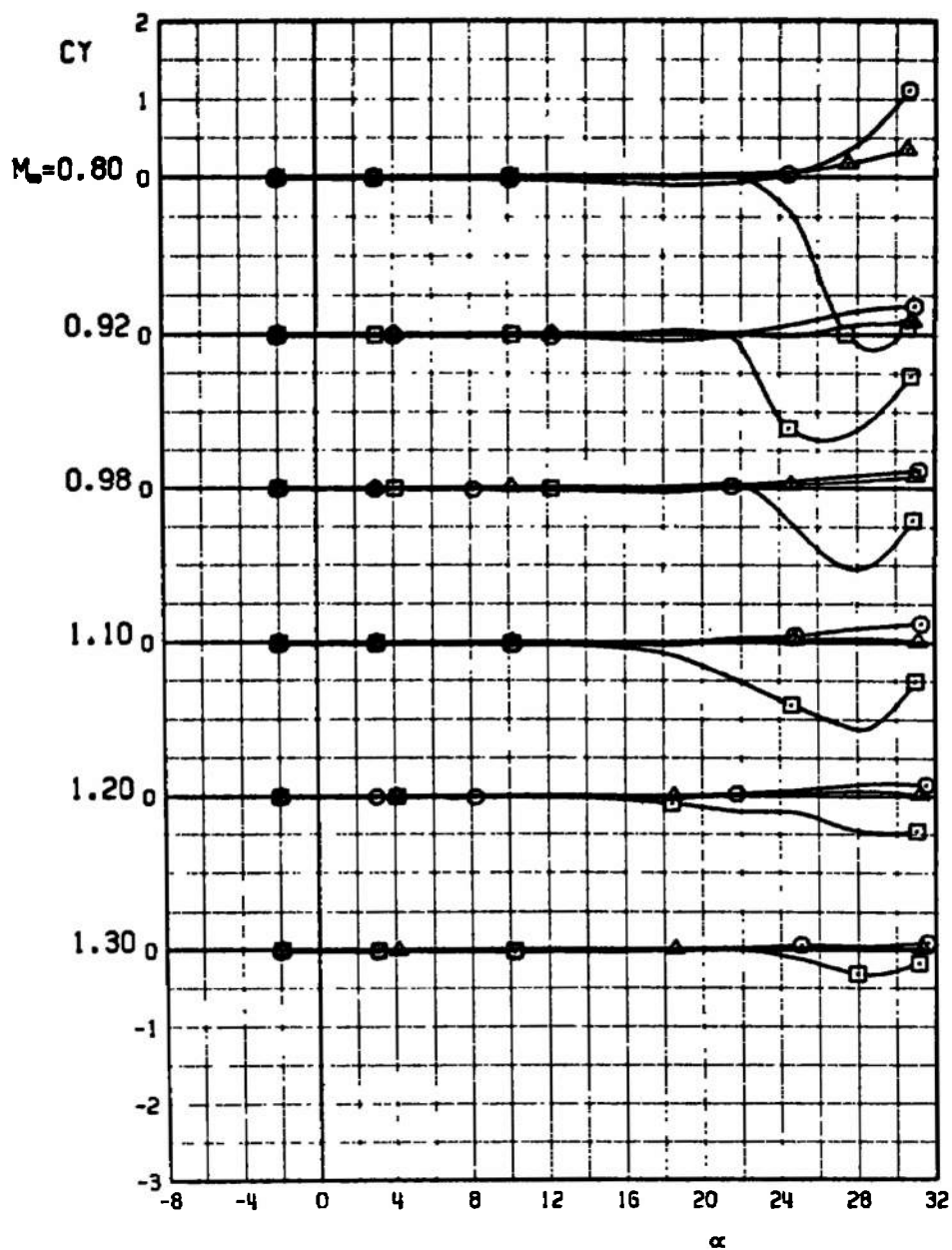
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	82WOFD	0	OFF	OFF	OFF	OFF	0
□	85WOFD	0	OFF	OFF	OFF	OFF	0
△	84WOFD	0	OFF	OFF	OFF	OFF	0



e. CAF versus α
Figure 15. Continued.

TEST CENTER AEDC TEST 1

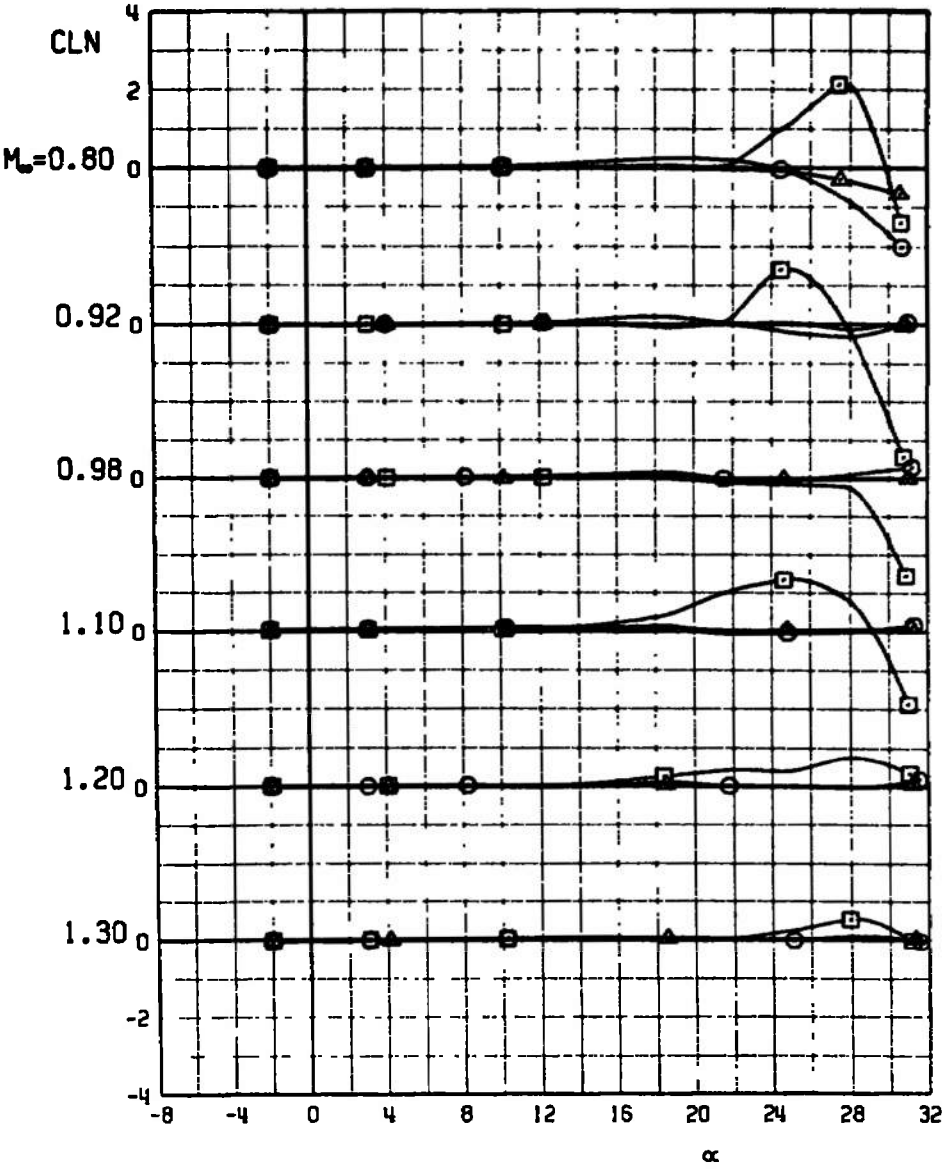
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF0	0	OFF	OFF	OFF	OFF	0
□	B5WOF0	0	OFF	OFF	OFF	OFF	0
△	B4WOF0	0	OFF	OFF	OFF	OFF	0



f. C_Y versus α
Figure 15. Continued.

TEST CENTER AEDC TEST 1

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B2WOFO	0	OFF	OFF	OFF	OFF	0
□	B5WOFO	0	OFF	OFF	OFF	OFF	0
△	B4WOFO	0	OFF	OFF	OFF	OFF	0



g. CLN versus α
Figure 15. Continued.

TEST CENTER AEDC TEST 1

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W0F0	0	OFF	OFF	OFF	OFF	0
□	B5W0F0	0	OFF	OFF	OFF	OFF	0
△	B4W0F0	0	OFF	OFF	OFF	OFF	0

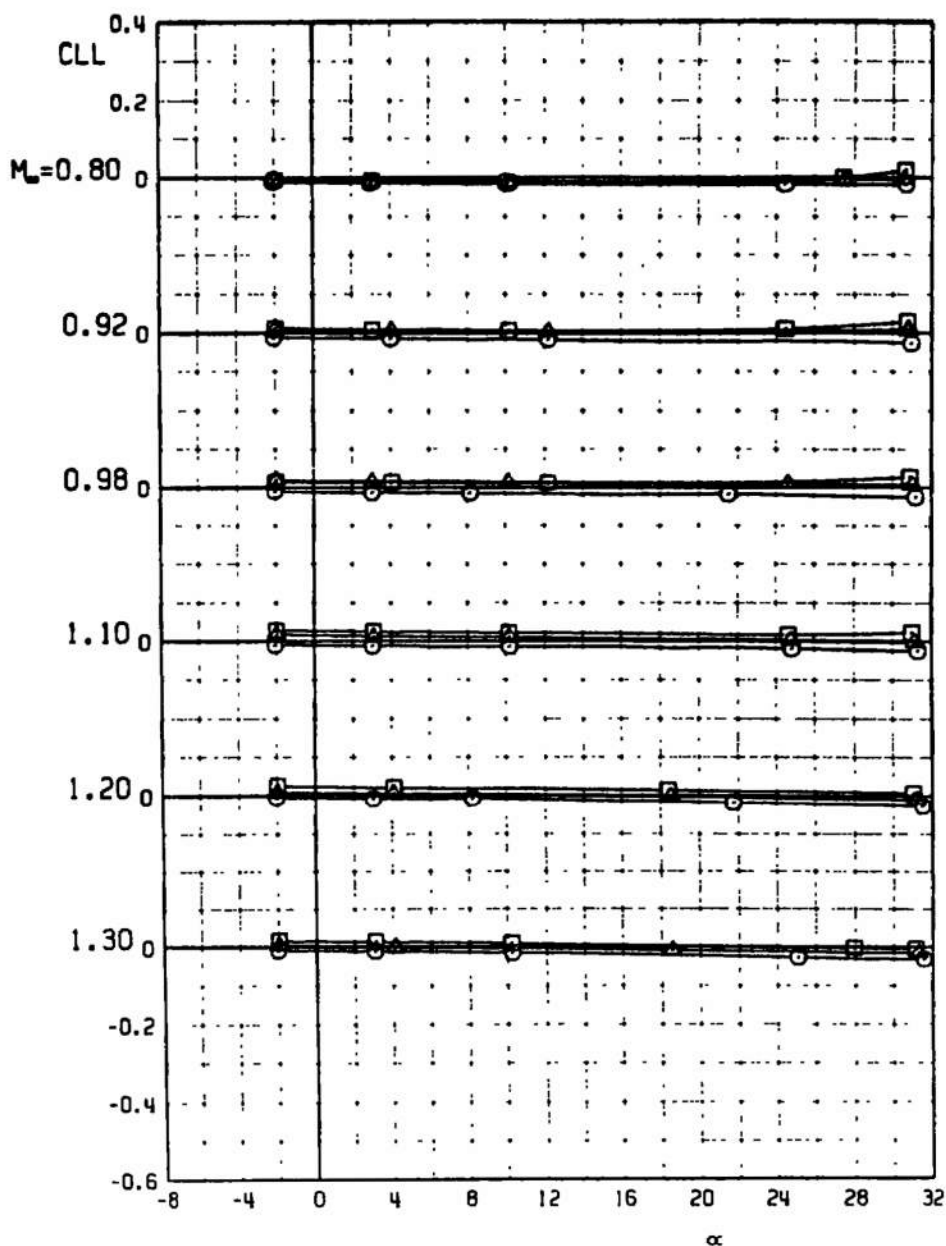
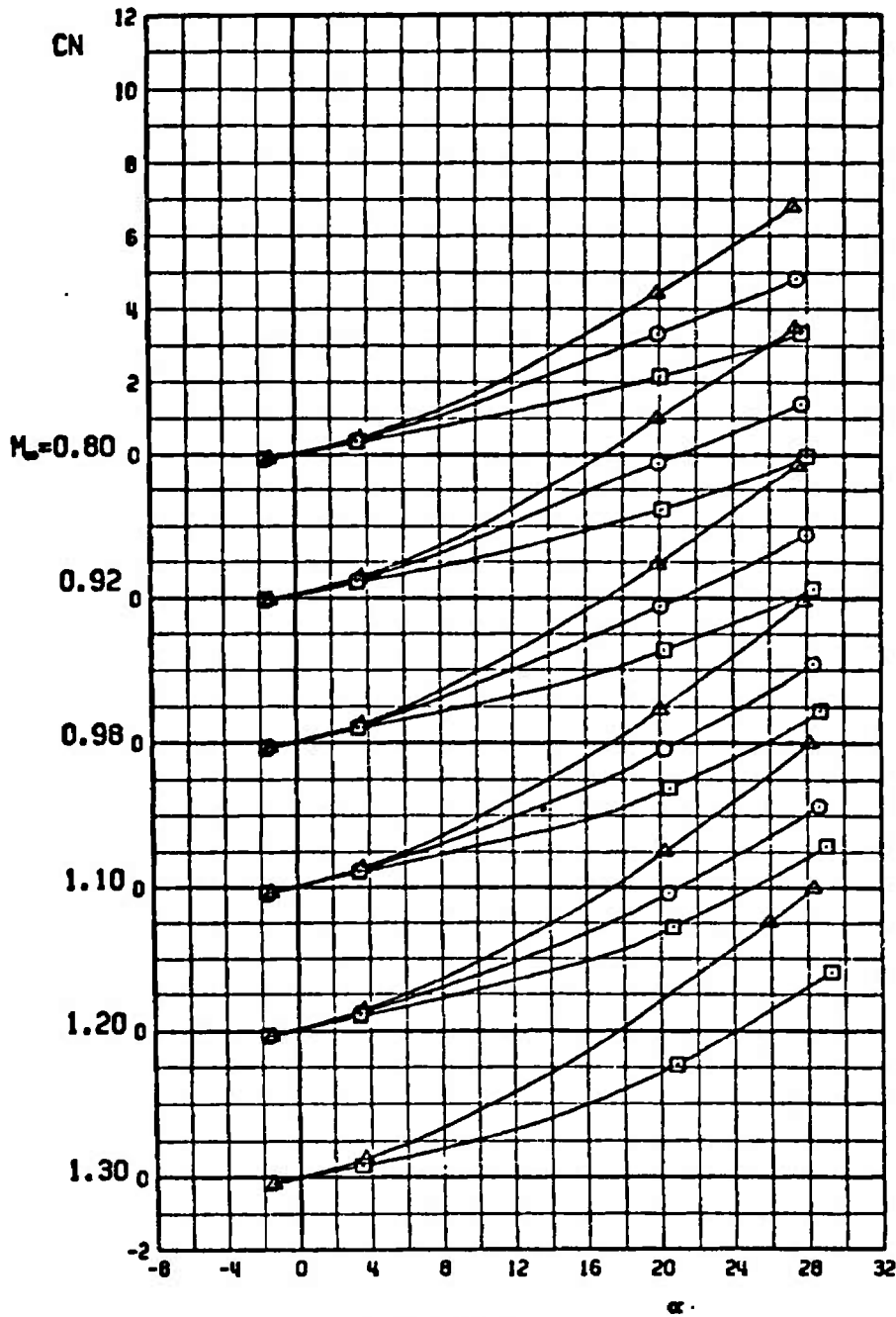


Figure 15. Concluded.

TEST CENTER AEDC TEST 2

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3W0F15	0	0	0	0	0	0
□	B3W0F21	0	0	0	0	0	0
△	B3W0F32	0	0	0	0	0	0

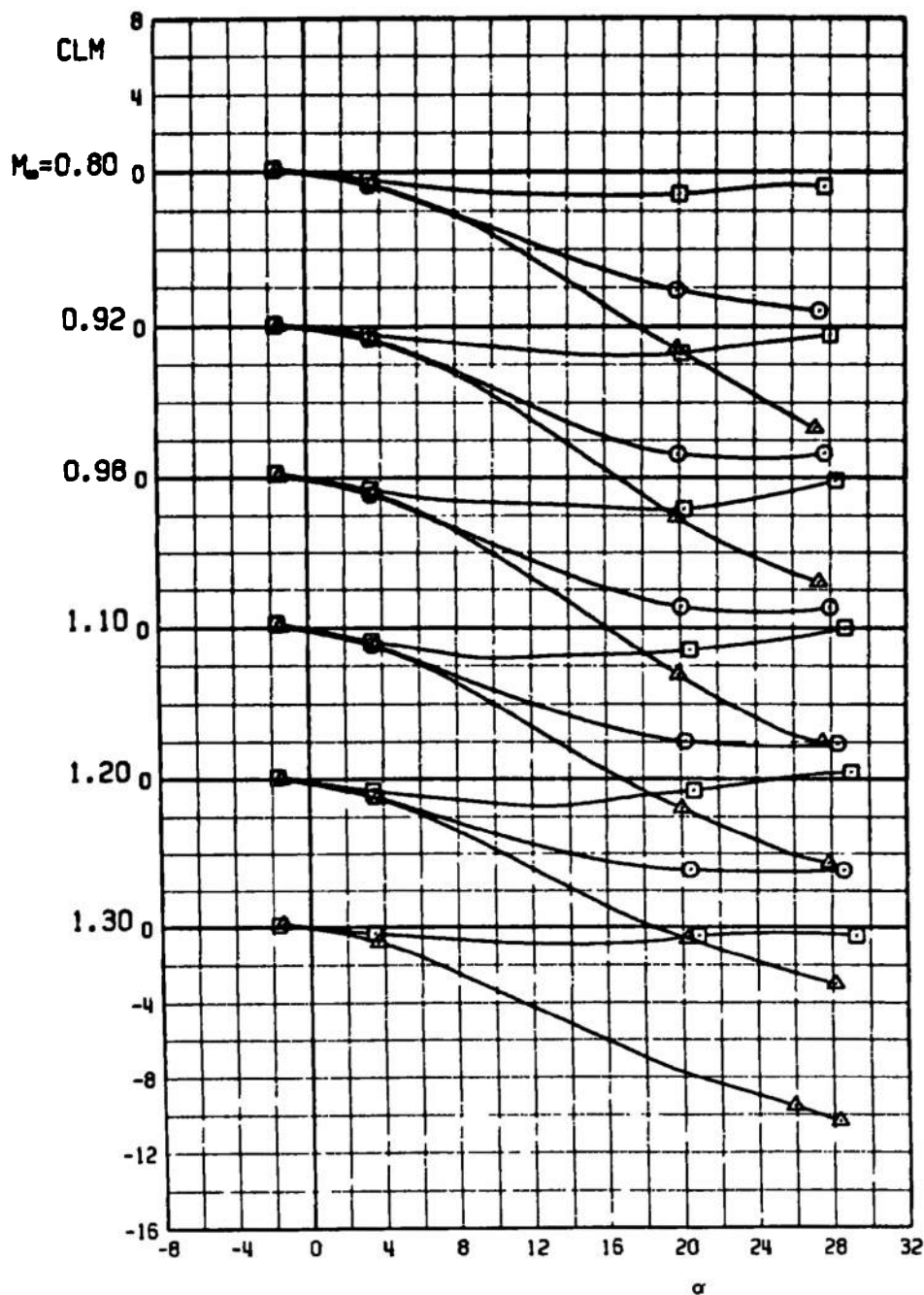


a. CN versus α

Figure 16. Test No. 2, comparison of aerodynamic coefficients of configurations B3W0F15, B3W0F21, and B3W0F32.

TEST CENTER AEDC TEST 2

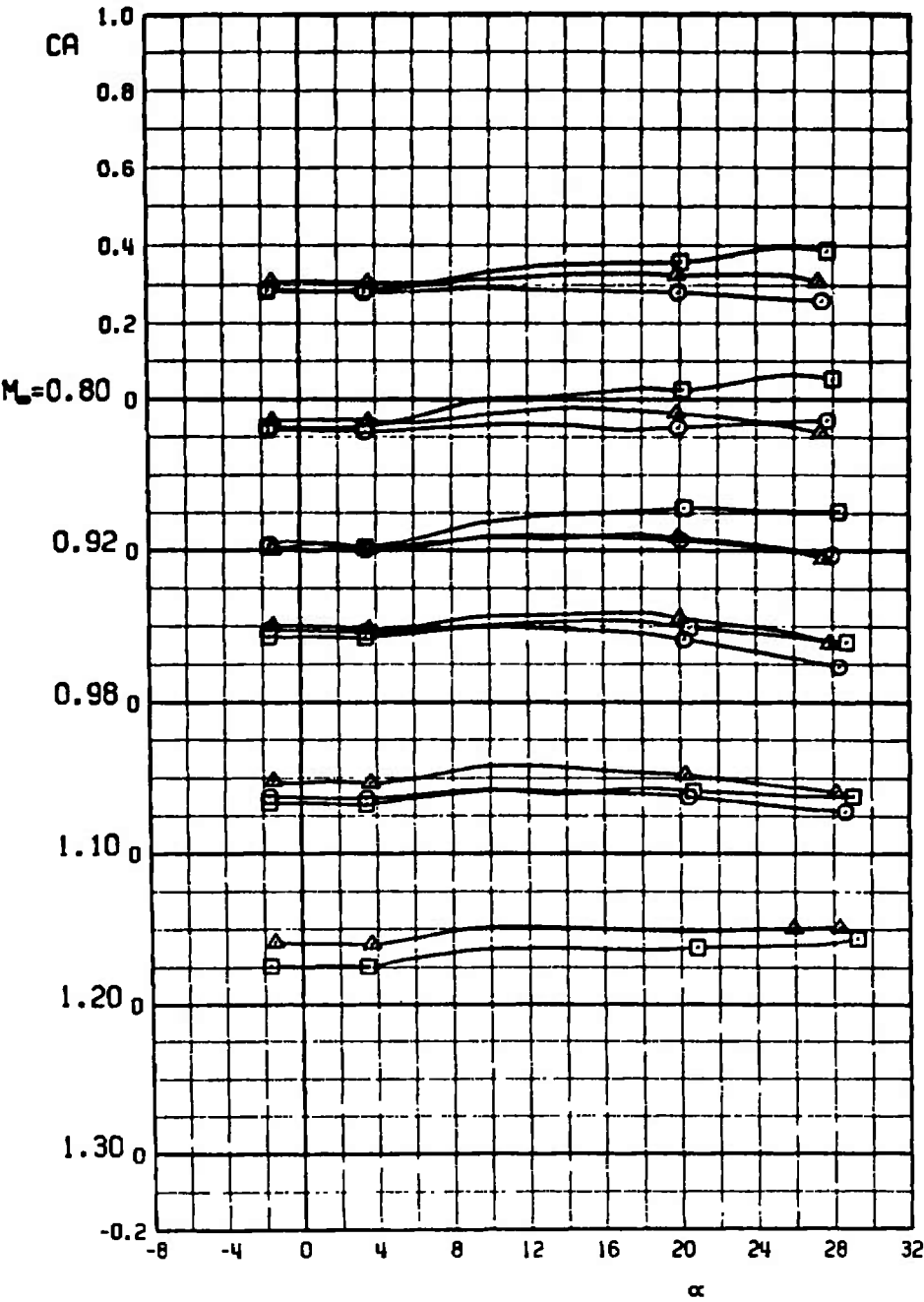
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF15	0	0	0	0	0	0
□	B3WOF21	0	0	0	0	0	0
△	B3WOF32	0	0	0	0	0	0



b. CLM versus α
Figure 16. Continued.

TEST CENTER AEDC TEST 2

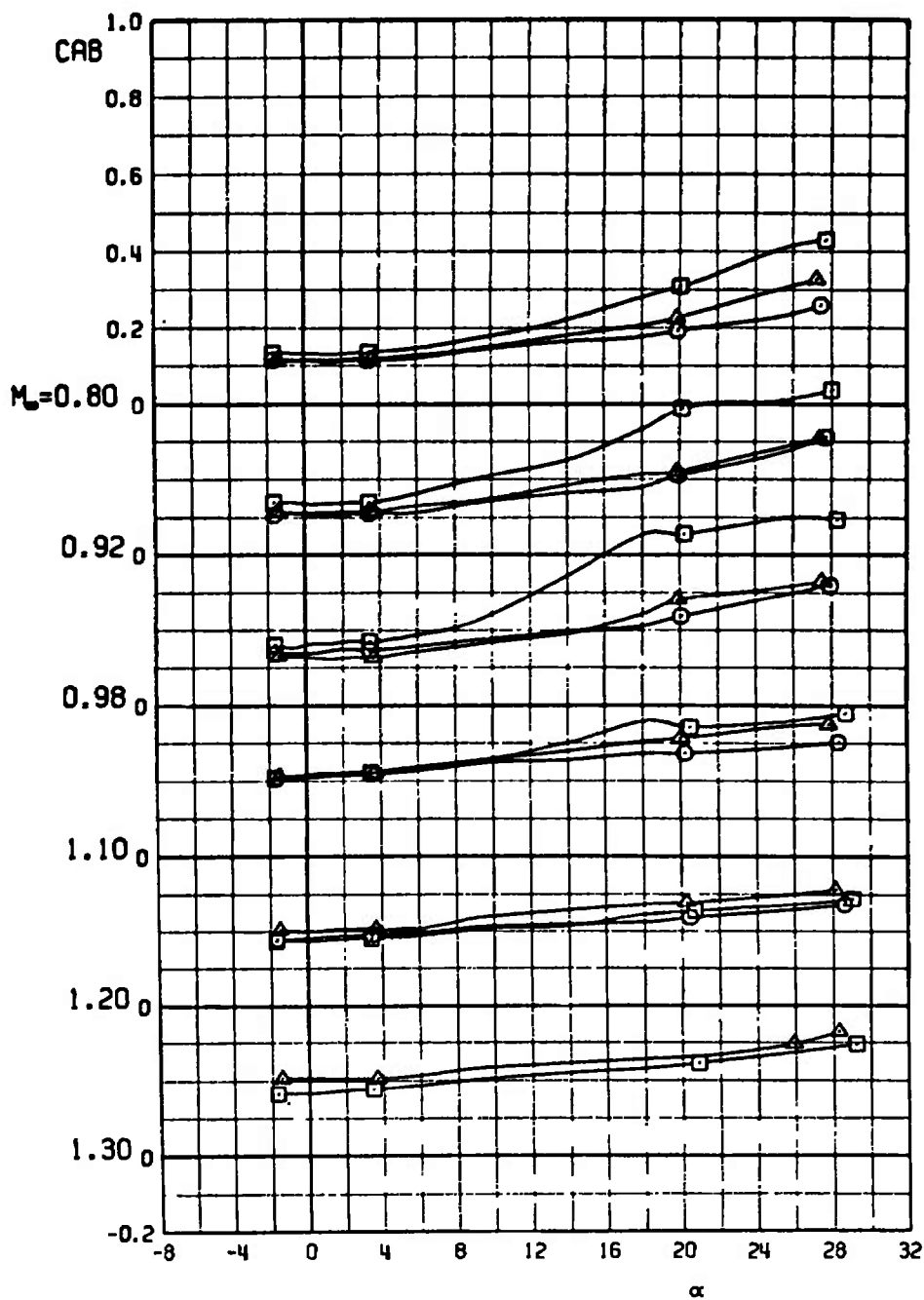
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF15	0	0	0	0	0	0
□	B3WOF21	0	0	0	0	0	0
△	B3WOF32	0	0	0	0	0	0



c. CA versus α
Figure 16. Continued.

TEST CENTER AEDC TEST 2

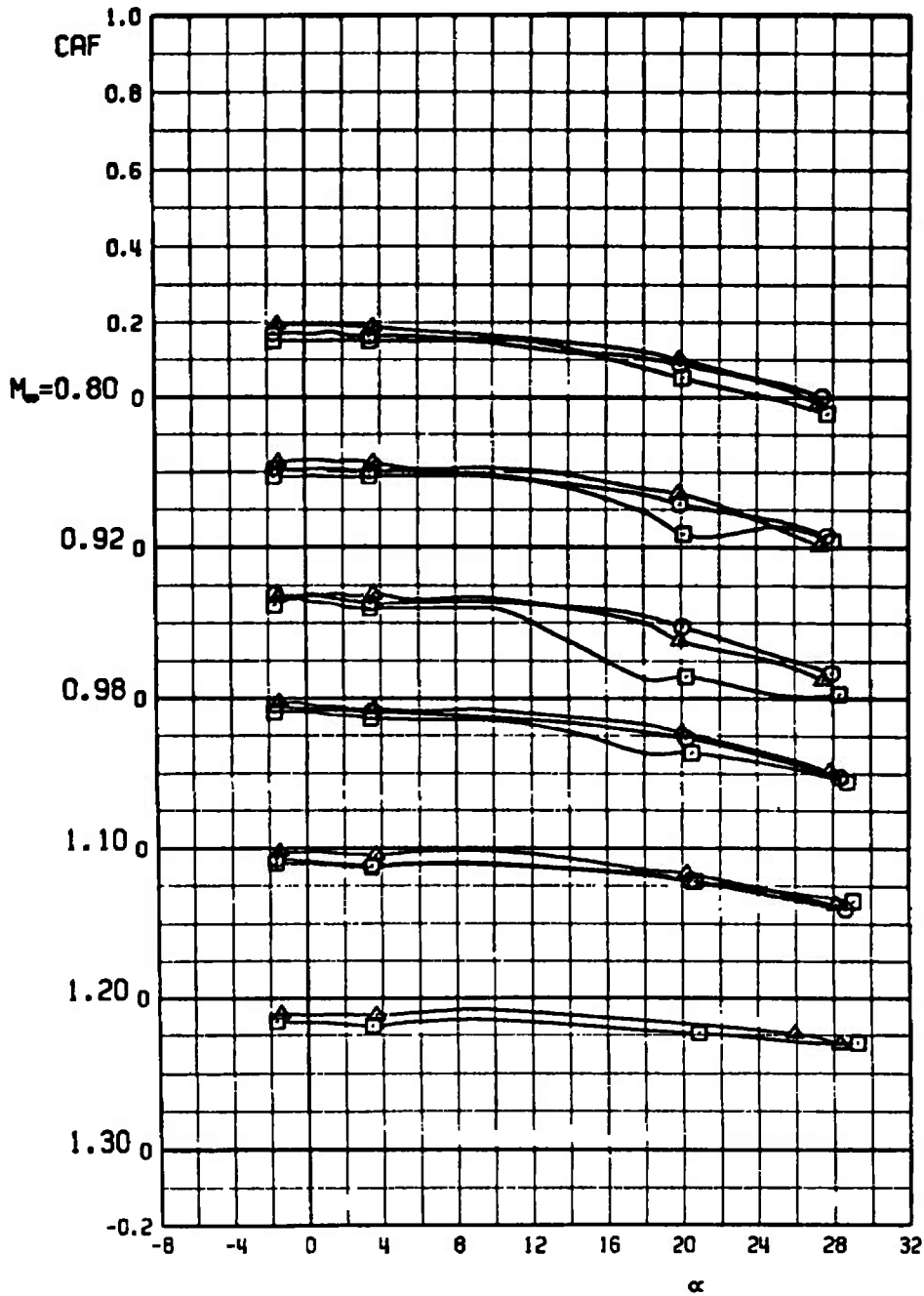
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF15	0	0	0	0	0	0
□	B3WOF21	0	0	0	0	0	0
△	B3WOF32	0	0	0	0	0	0



d. CAB versus α
Figure 16. Continued.

TEST CENTER AEDC TEST 2

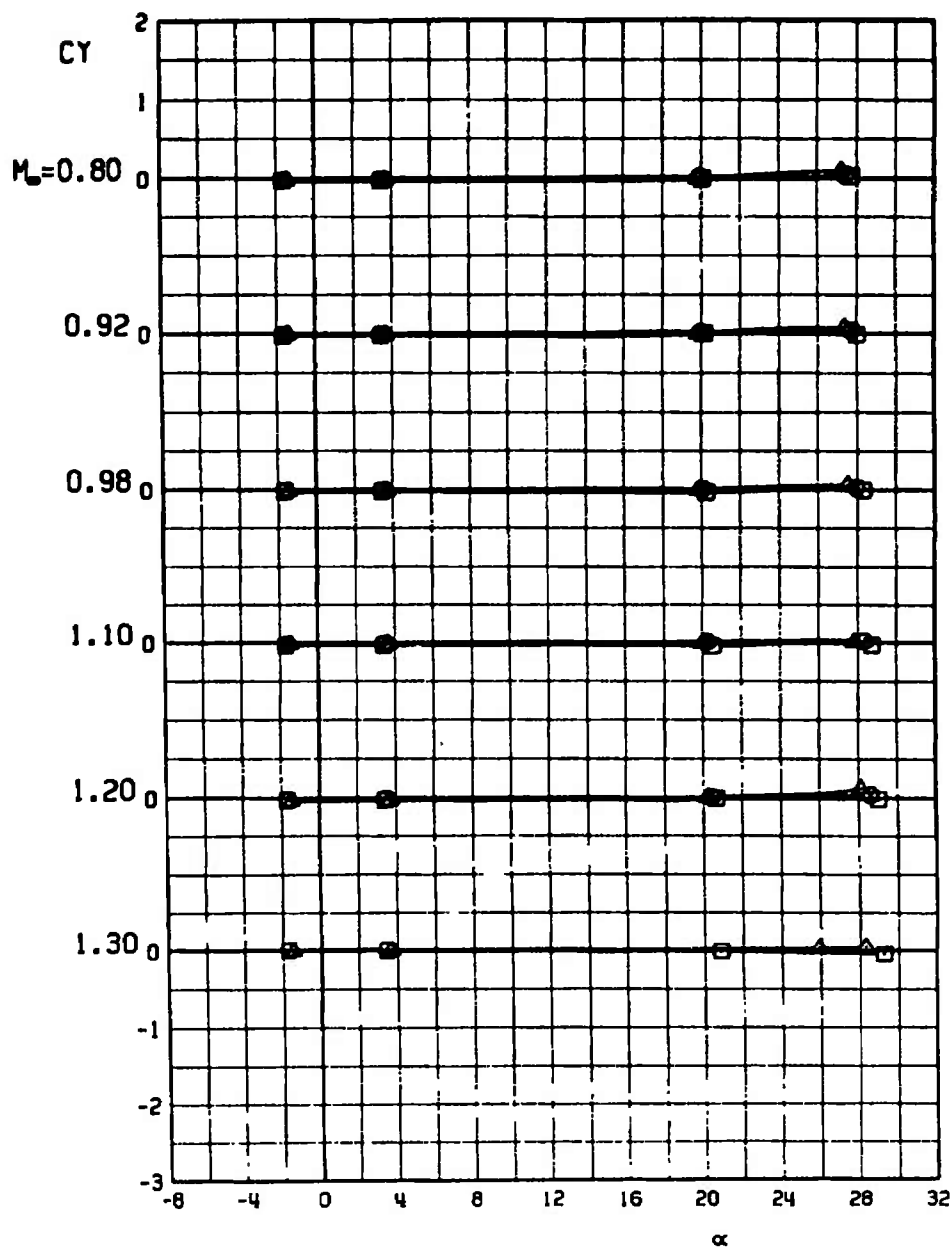
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B3WOF15	0	0	0	0	0	0
□	B3WOF21	0	0	0	0	0	0
△	B3WOF32	0	0	0	0	0	0



e. CAF versus α
Figure 16. Continued.

TEST CENTER AEDC TEST 2

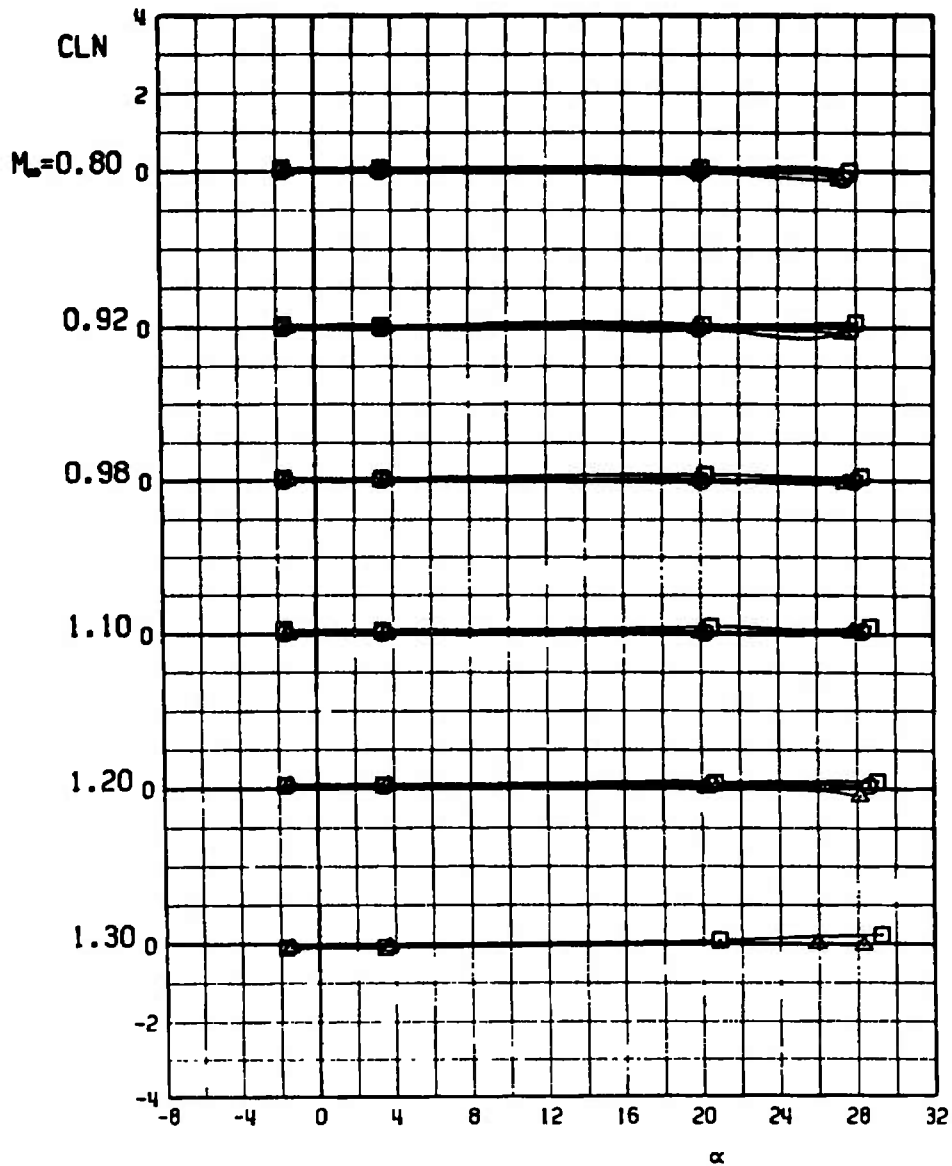
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF15	0	0	0	0	0	0
□	B3WOF21	0	0	0	0	0	0
△	B3WOF32	0	0	0	0	0	0



f. CY versus α
Figure 16. Continued.

TEST CENTER AEDC TEST 2

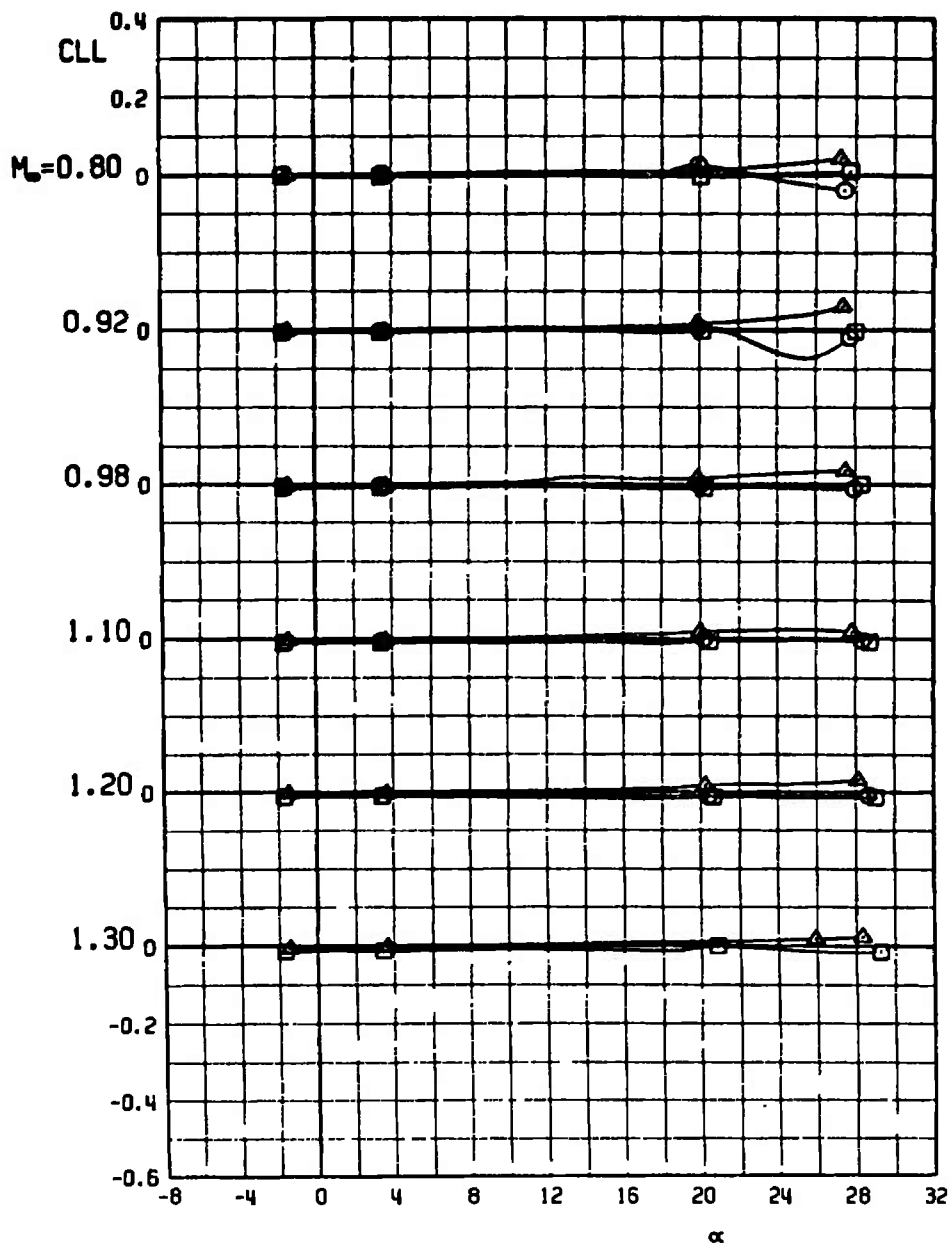
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B3WOF15	0	0	0	0	0	0
□	B3WOF21	0	0	0	0	0	0
△	B3WOF32	0	0	0	0	0	0



g. CL_N versus α
Figure 16. Continued.

TEST CENTER AEOC TEST 2

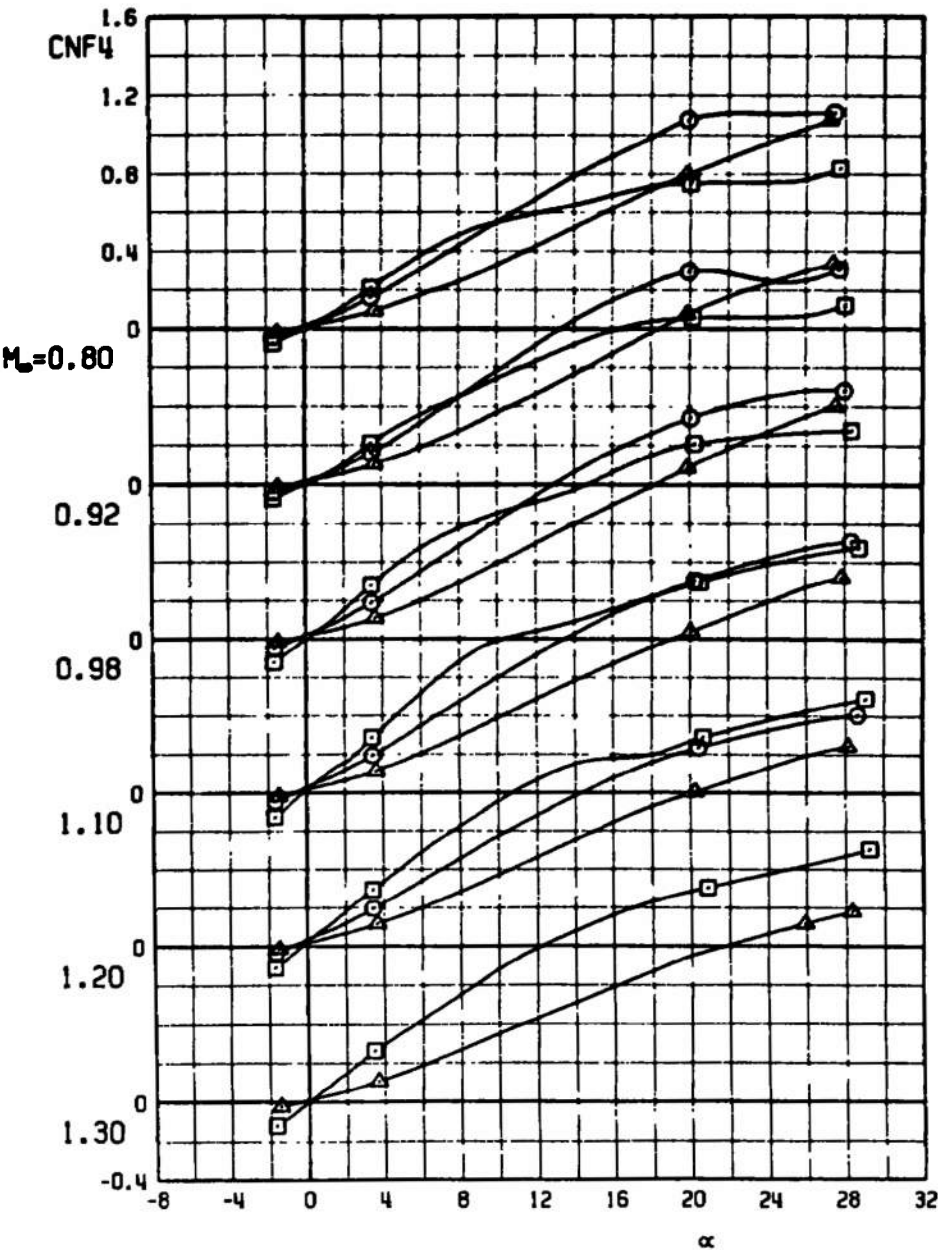
	CONF	L	OEL1	OEL2	OEL3	OEL4	PHI
○	B3WOF15	0	0	0	0	0	0
□	B3WOF21	0	0	0	0	0	0
△	B3WOF32	0	0	0	0	0	0



h. CLL versus α
Figure 16. Continued.

TEST CENTER AEDC TEST 2

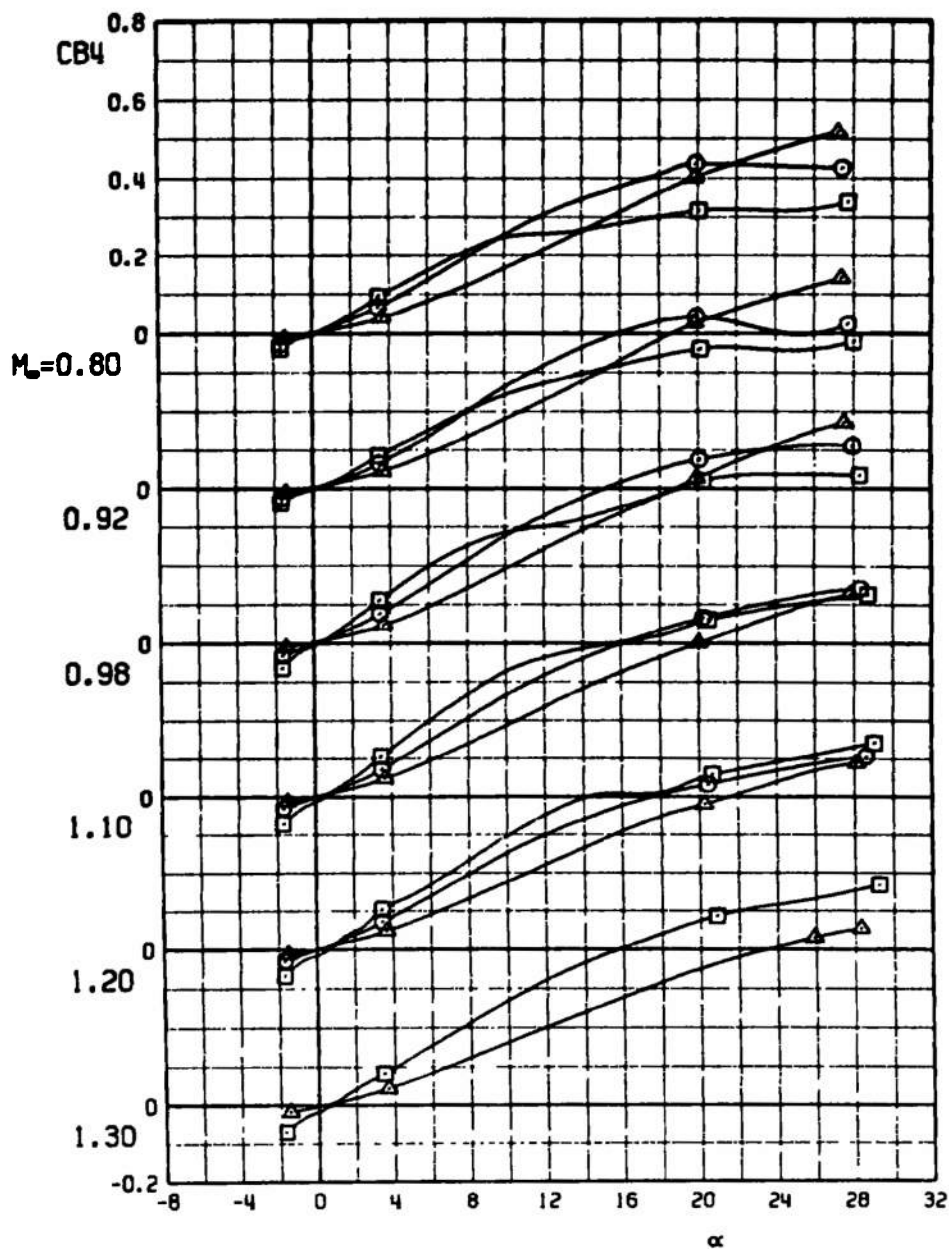
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF15	0	0	0	0	0	0
□	B3WOF21	0	0	0	0	0	0
△	B3WOF32	0	0	0	0	0	0



i. CNF4 versus α
Figure 16. Continued.

TEST CENTER AEDC TEST 2

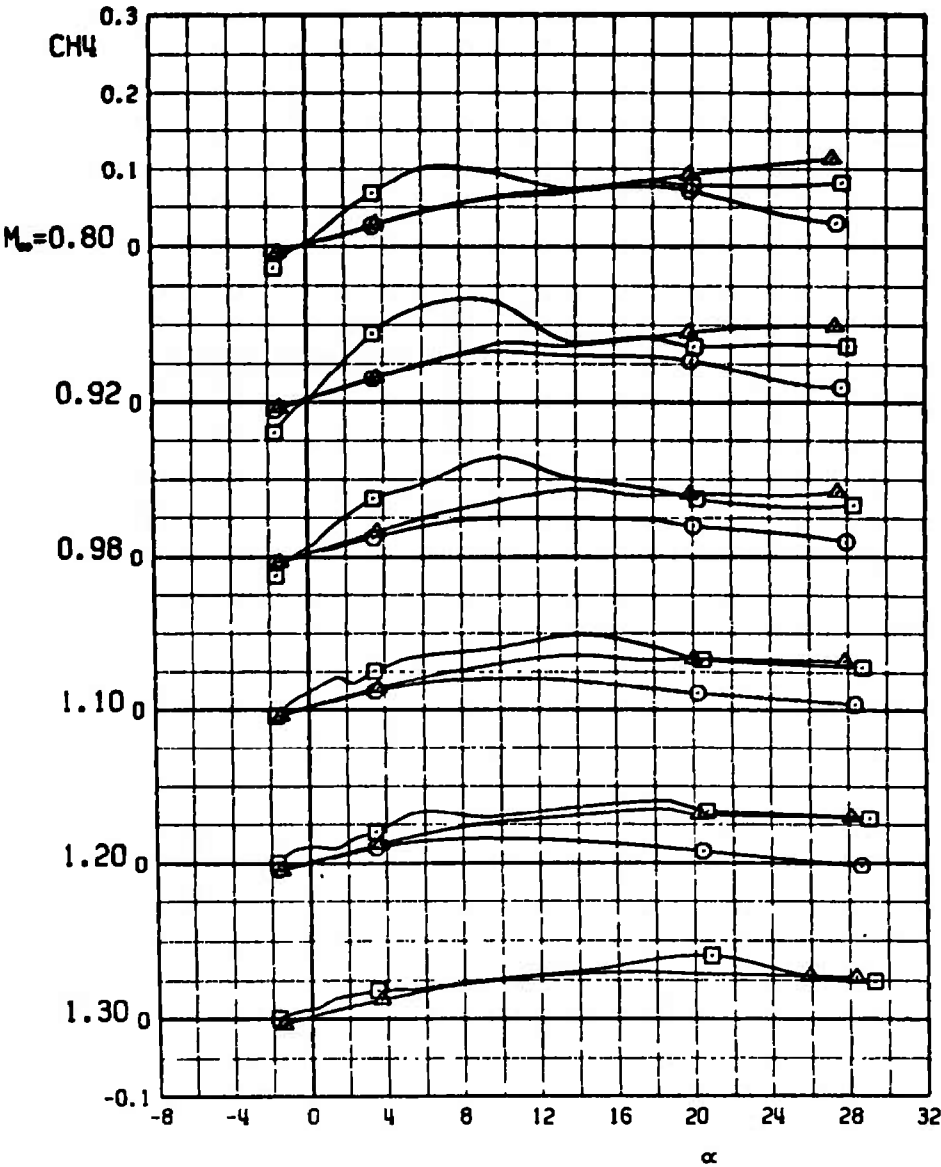
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF15	0	0	0	0	0	0
□	B3WOF21	0	0	0	0	0	0
△	B3WOF32	0	0	0	0	0	0



j. CB_4 versus α
Figure 16. Continued.

TEST CENTER AEDC TEST 2

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF15	0	0	0	0	0	0
□	B3WOF21	0	0	0	0	0	0
△	B3WOF32	0	0	0	0	0	0



k. CH4 versus α
Figure 16. Concluded.

TEST CENTER AEDC TEST 2

	CONF	L	DEL1	DEL2	DEL3	DEL4	PH1
○	B3WOF14	0	0	0	0	0	0
□	B3WOF36	0	0	0	0	0	0

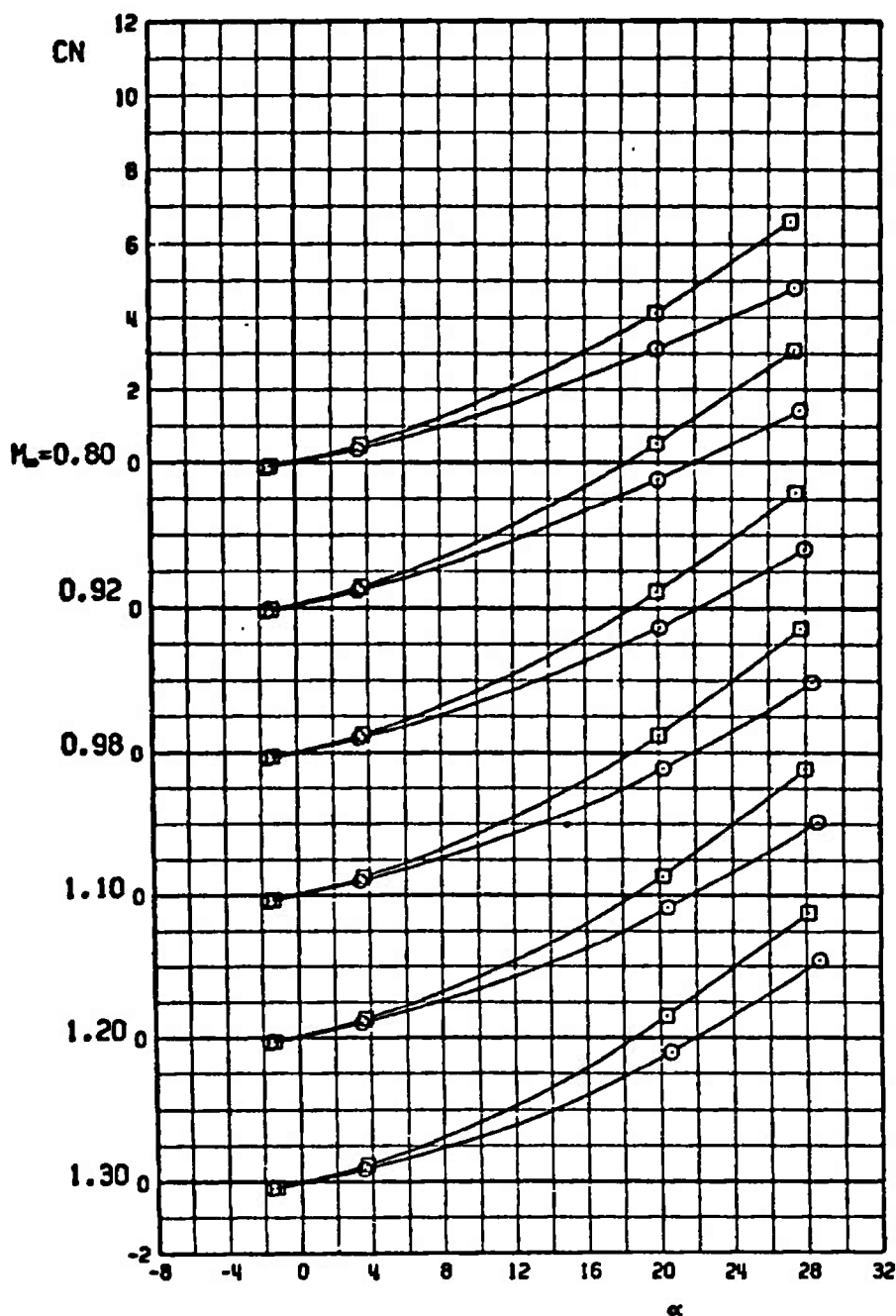
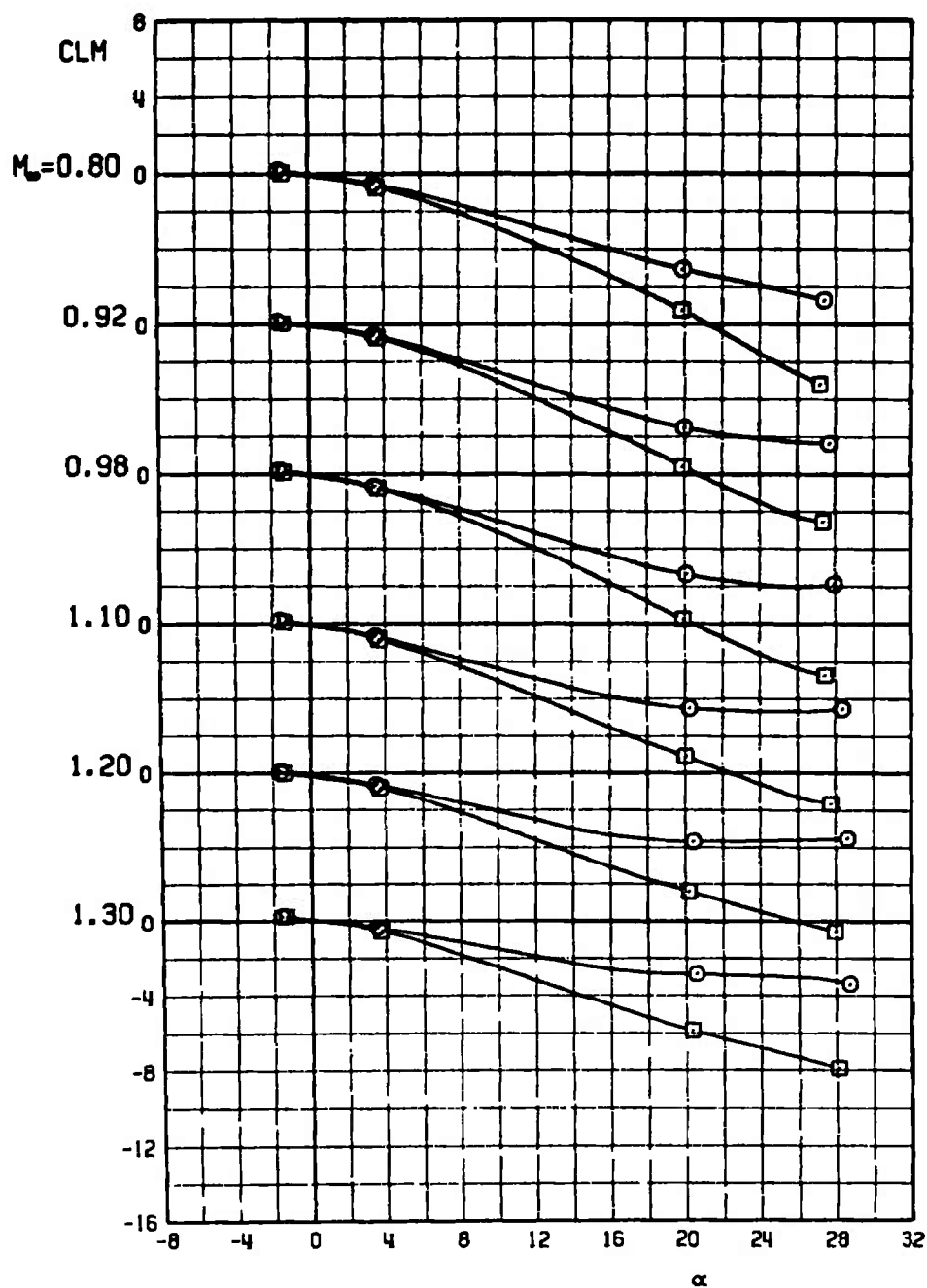
a. C_N versus α

Figure 17. Test No. 2, comparison of aerodynamic coefficients of configurations B3WOF14 and B3WOF36.

TEST CENTER AEDC TEST 2

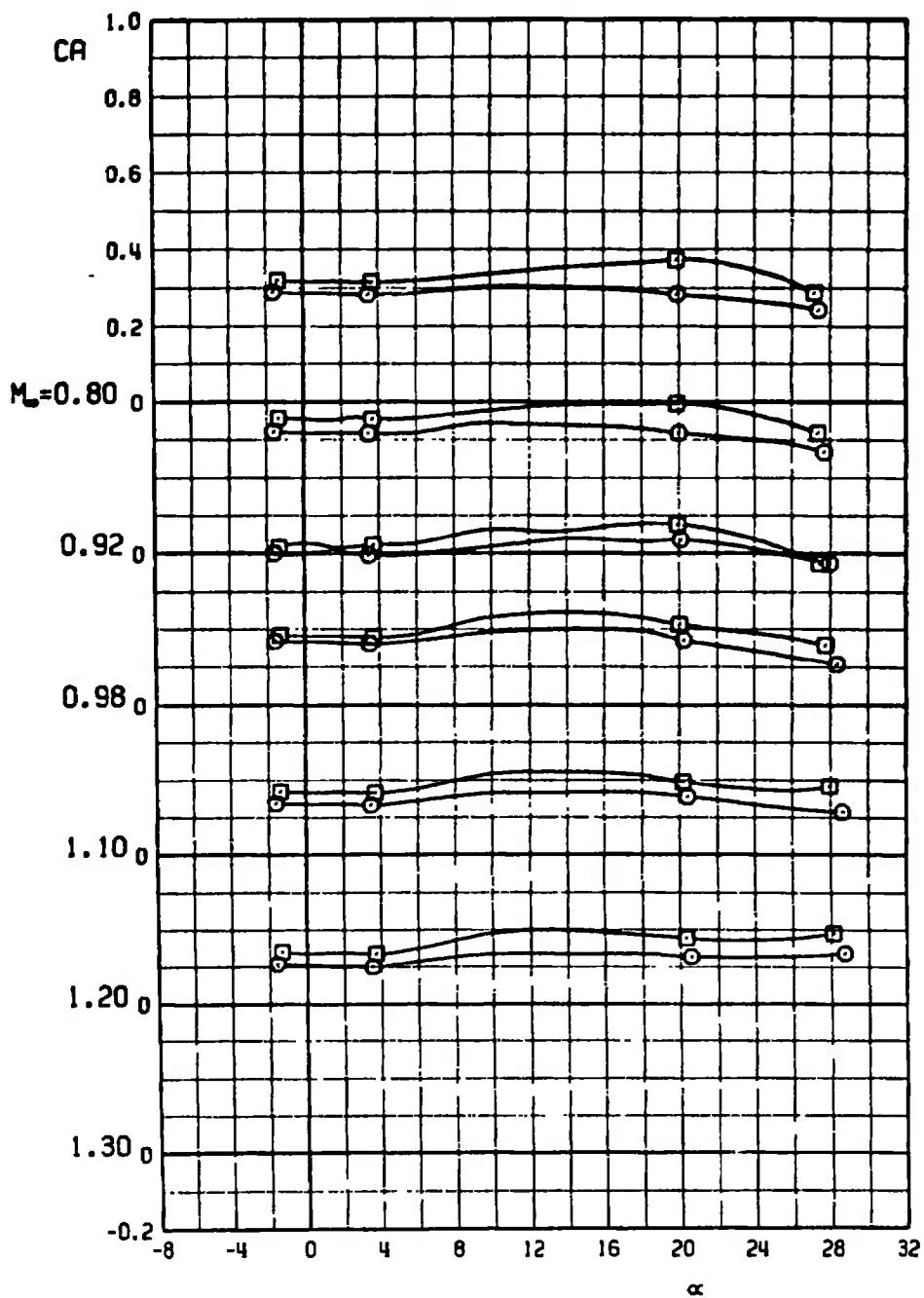
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF14	0	0	0	0	0	0
□	B3WOF36	0	0	0	0	0	0



b. CLM versus α
Figure 17. Continued.

TEST CENTER AEDC TEST 2

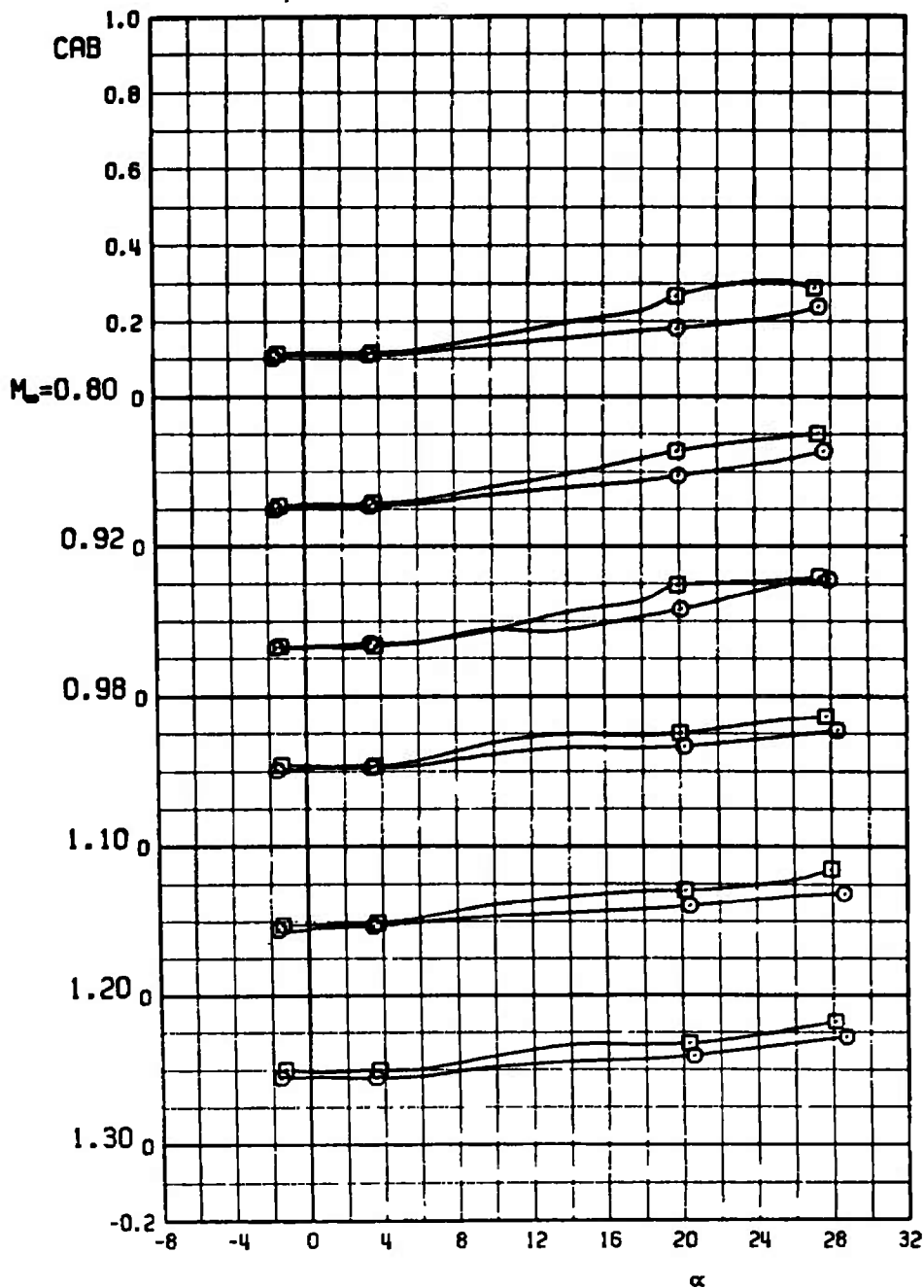
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF14	0	0	0	0	0	0
□	B3WOF36	0	0	0	0	0	0



c. CA versus α
Figure 17. Continued.

TEST CENTER AEDC TEST 2

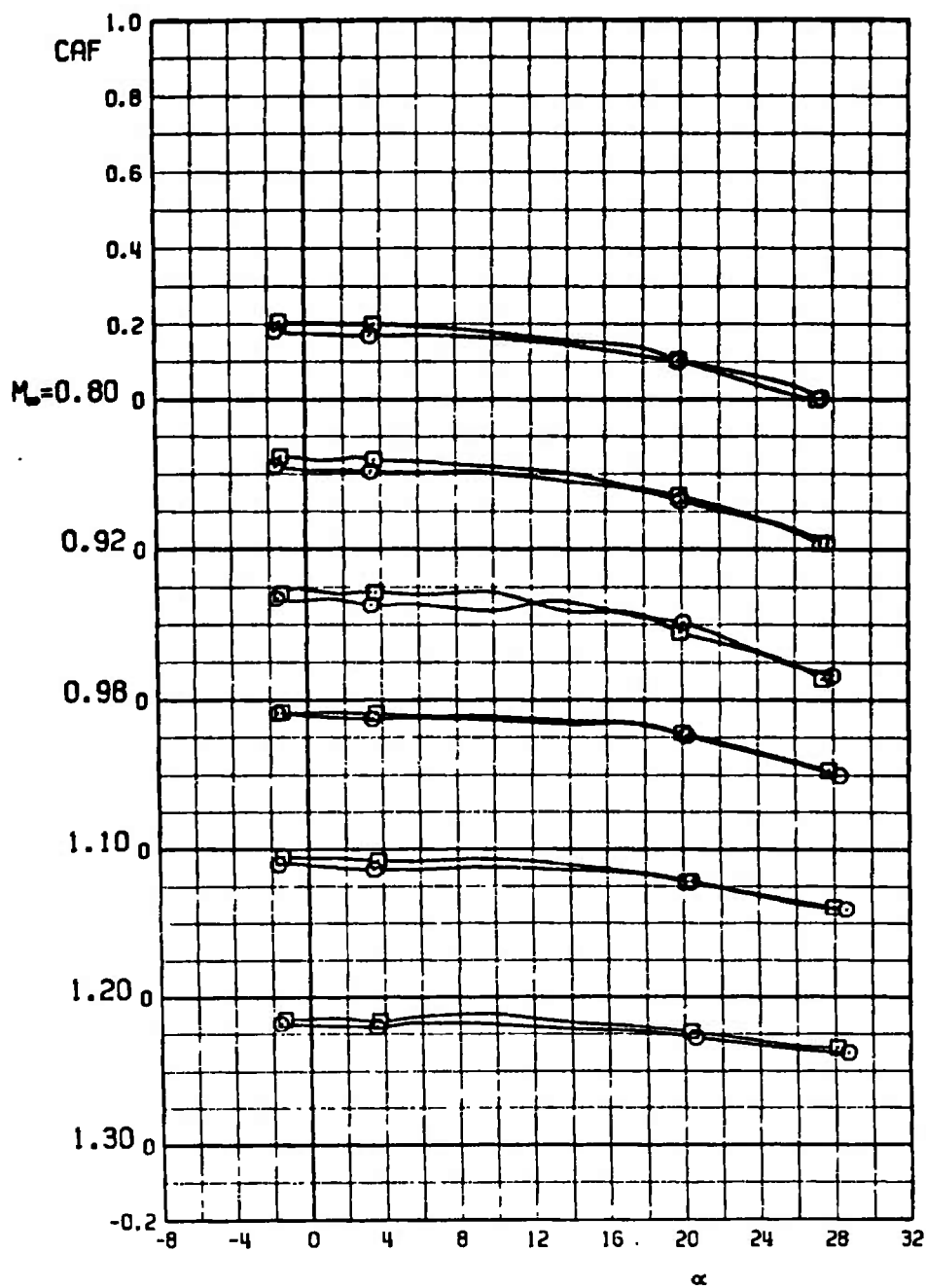
	CONF	L	OEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF14	0	0	0	0	0	0
□	B3WOF36	0	0	0	0	0	0



d. CAB versus α
Figure 17. Continued.

TEST CENTER AEOC TEST 2

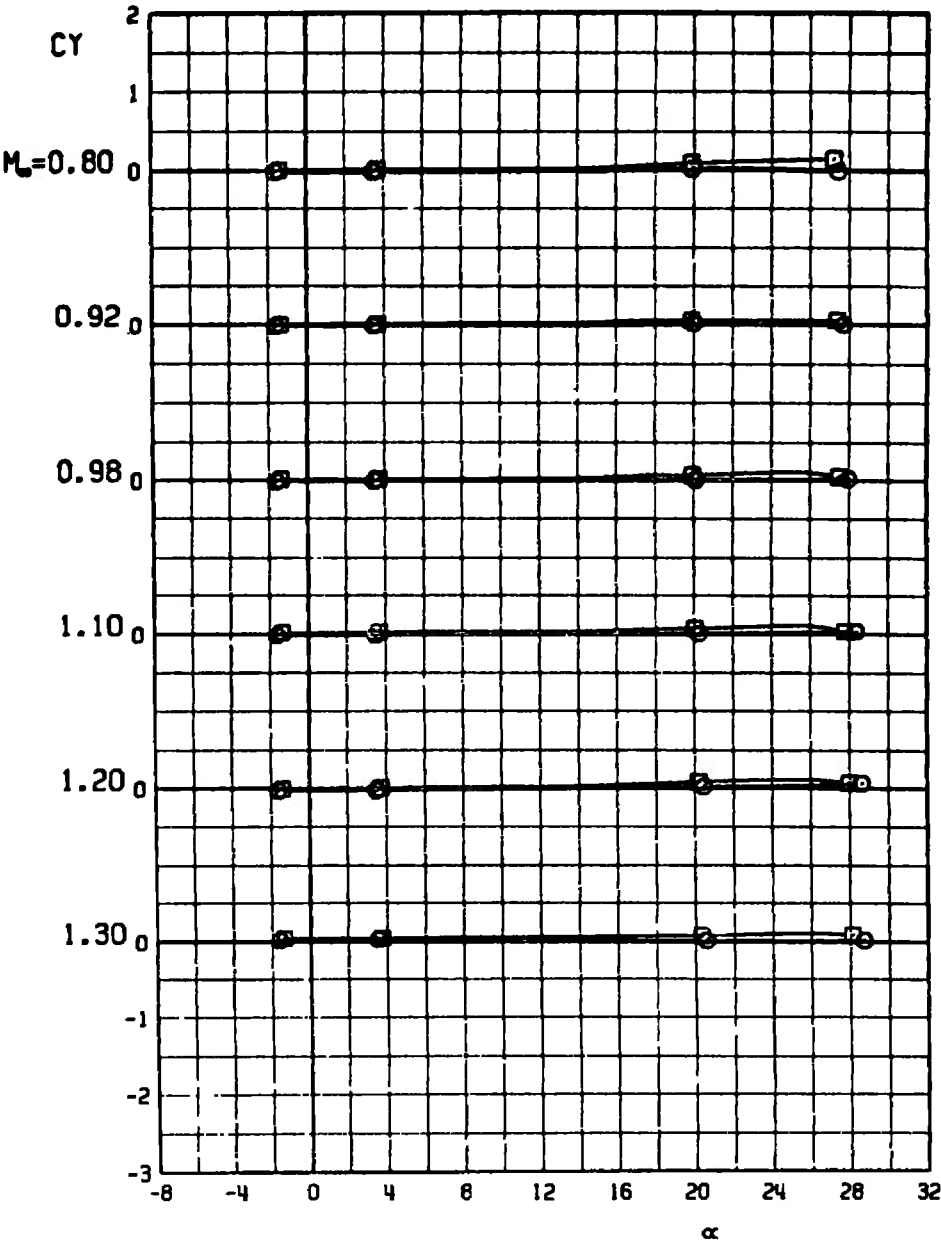
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF14	0	0	0	0	0	0
□	B3WOF36	0	0	0	0	0	0



e. CAF versus α
Figure 17. Continued.

TEST CENTER AEDC TEST 2

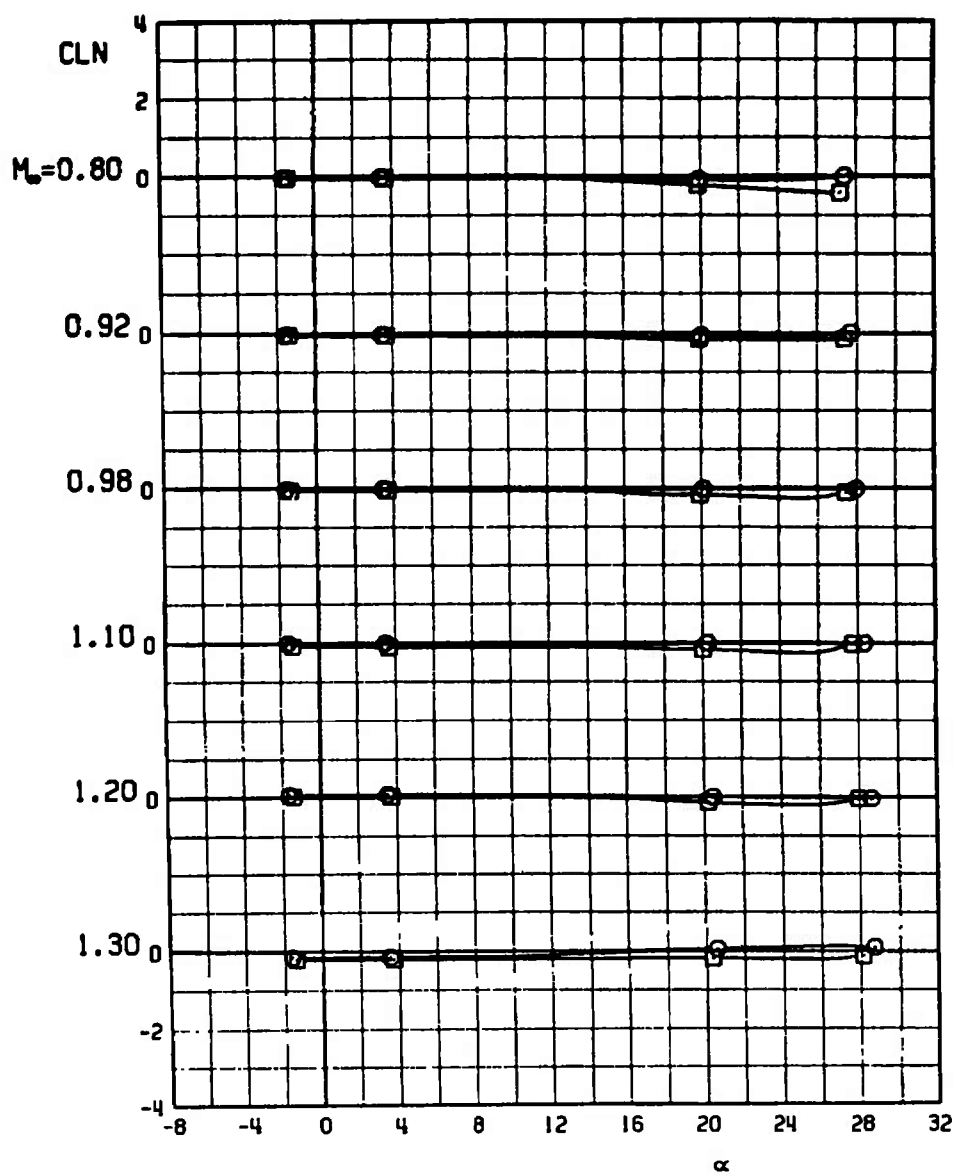
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	83WOF14	0	0	0	0	0	0
□	83WOF36	0	0	0	0	0	0



f. C_Y versus α
Figure 17. Continued.

TEST CENTER AEDC TEST 2

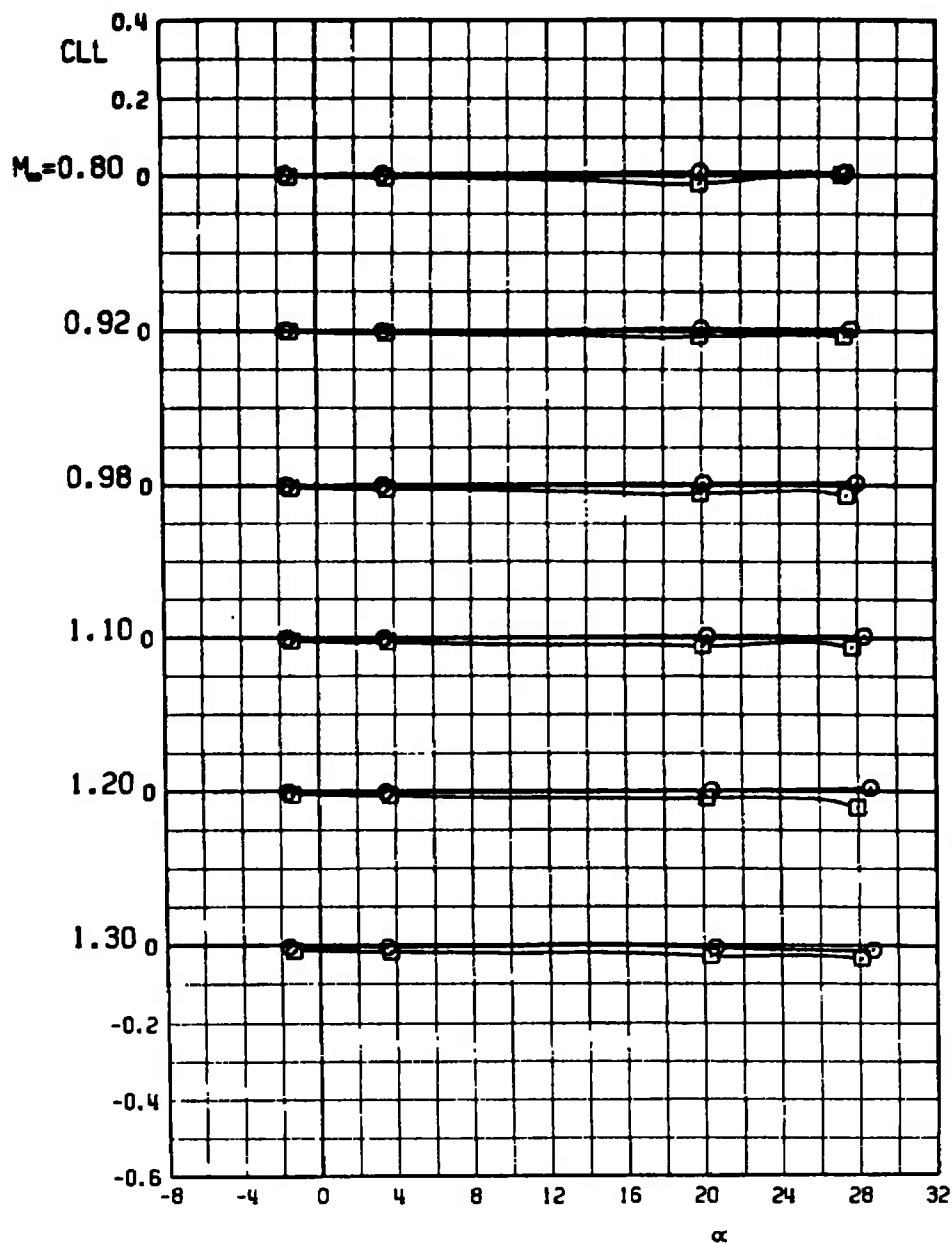
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF14	0	0	0	0	0	0
□	B3WOF36	0	0	0	0	0	0



g. CLN versus α
Figure 17. Continued.

TEST CENTER AEDC TEST 2

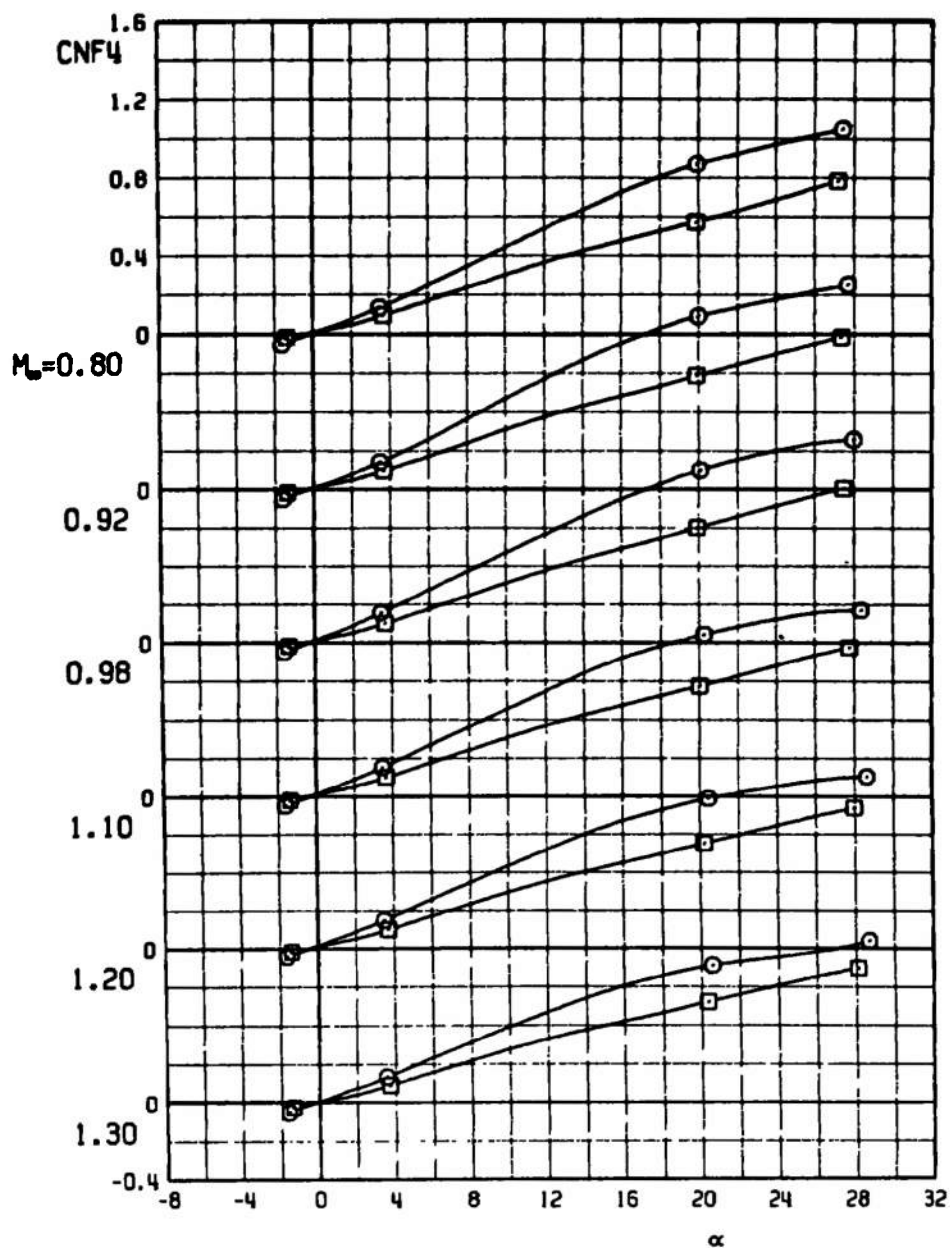
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF14	0	0	0	0	0	0
□	B3WOF36	0	0	0	0	0	0



h. CLL versus α
Figure 17. Continued.

TEST CENTER AEDC TEST 2

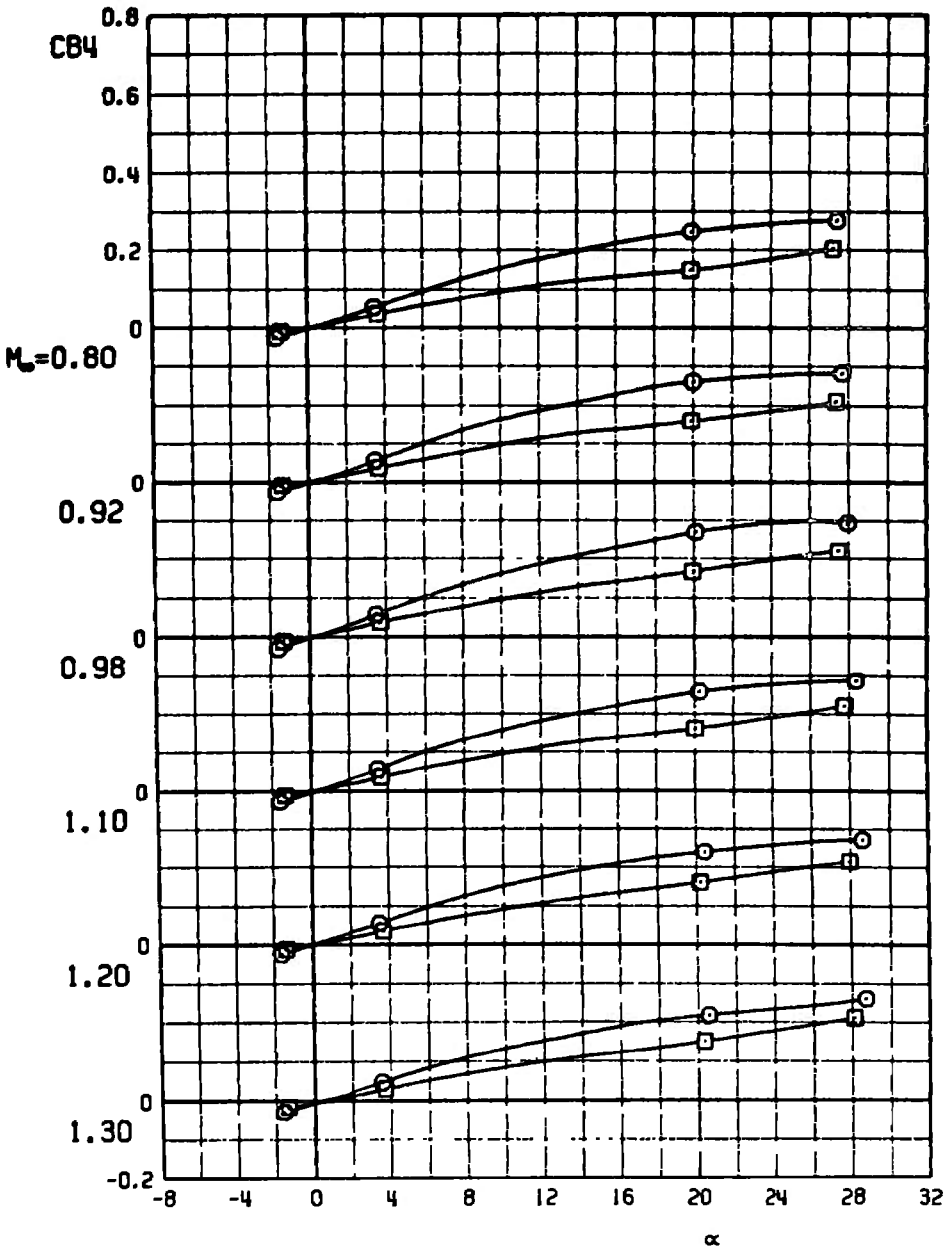
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF14	0	0	0	0	0	0
□	B3WOF36	0	0	0	0	0	0



i. CNF4 versus α
Figure 17. Continued.

TEST CENTER AEDC TEST 2

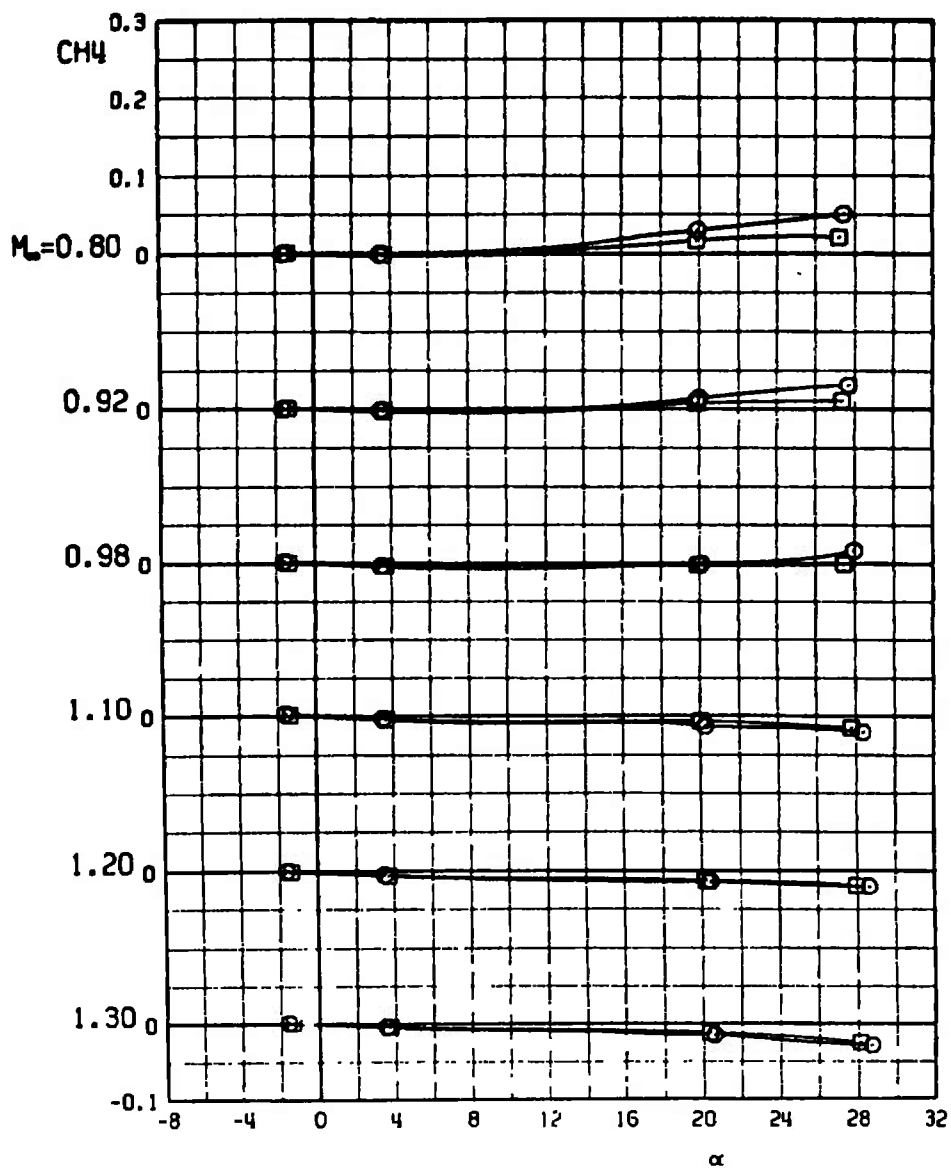
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	83WOF14	0	0	0	0	0	0
□	83WOF36	0	0	0	0	0	0



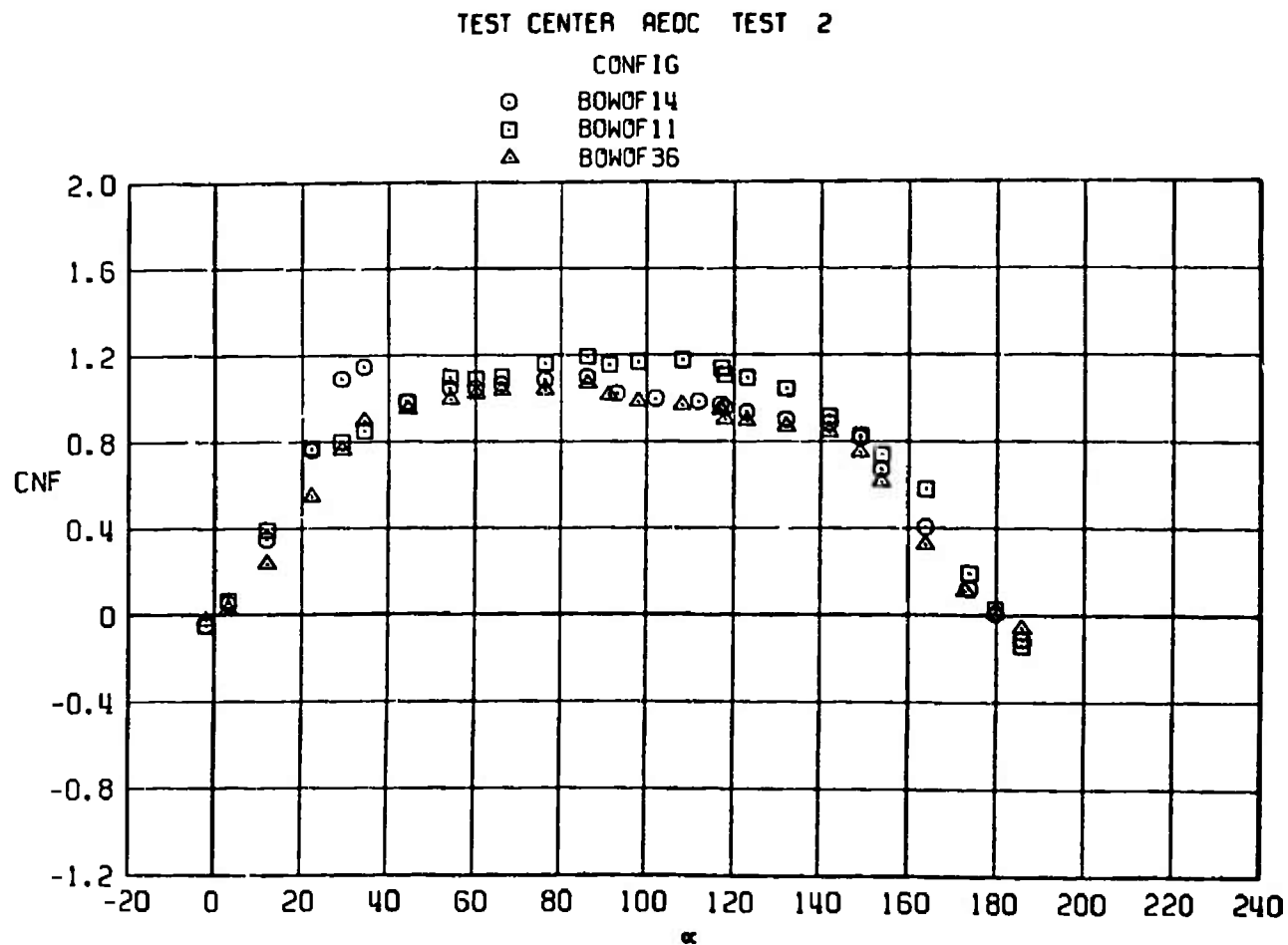
j. CB_4 versus α
Figure 17. Continued.

TEST CENTER AEDC TEST 2

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B3WOF14	0	0	0	0	0	0
□	B3WOF36	0	0	0	0	0	0



k. CH_4 versus α
Figure 17. Concluded.



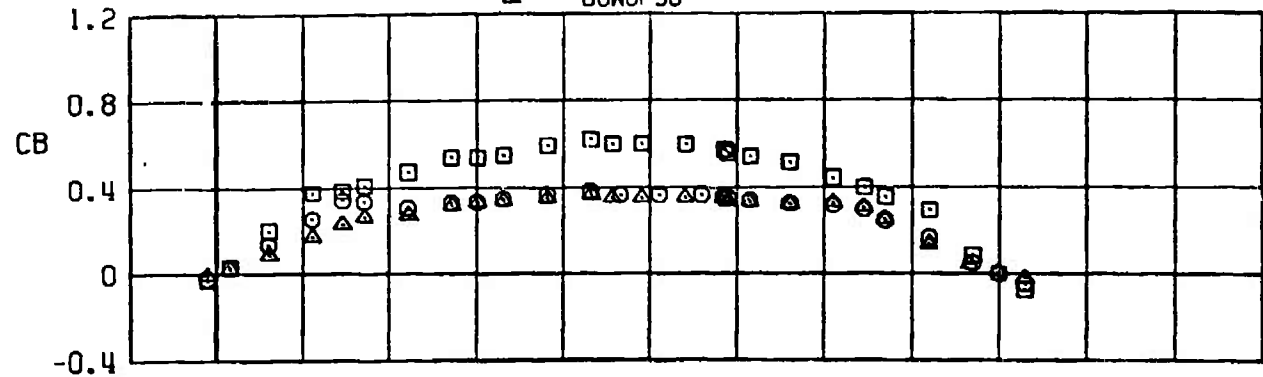
a. CN versus α

Figure 18. Test No. 2, comparison of aerodynamic coefficients of configurations BOWOF14, BOWOF11, and BOWOF36 at $M_\infty = 0.8$.

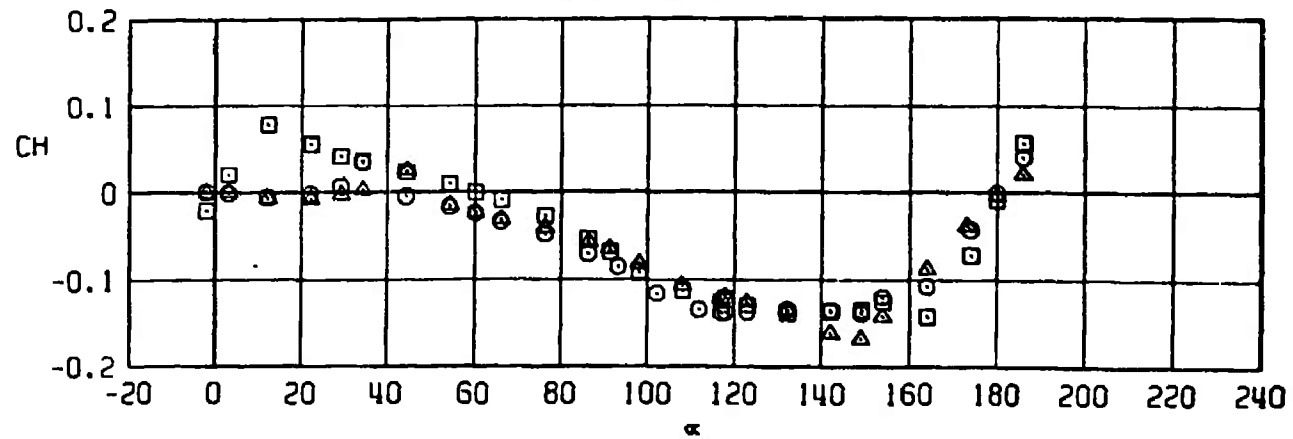
TEST CENTER AEDC TEST 2

CONFIG

- BOWOF14
- BOWOF11
- △ BOWOF36

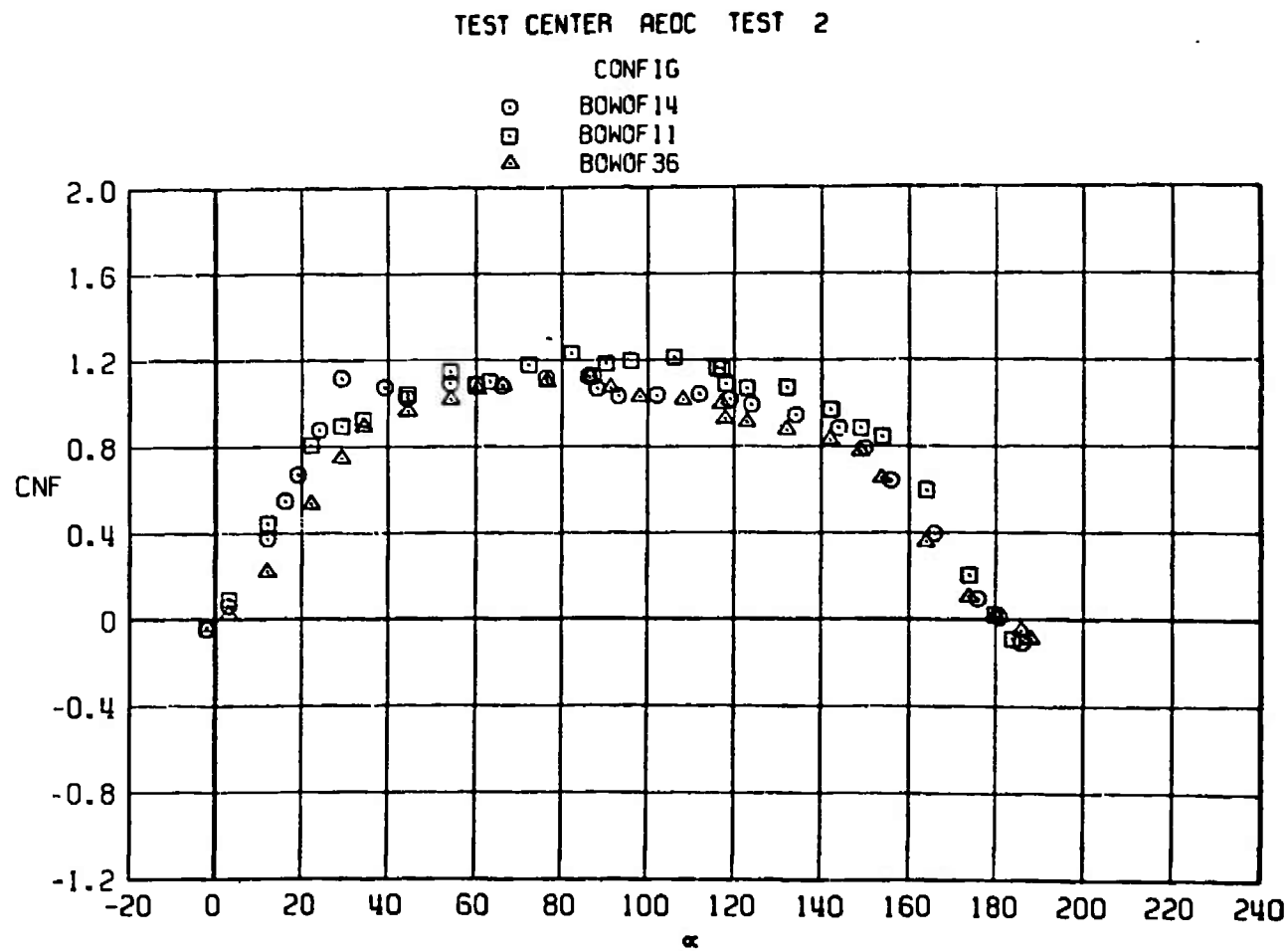


b. CB versus α



c. CH versus α

Figure 18. Concluded.



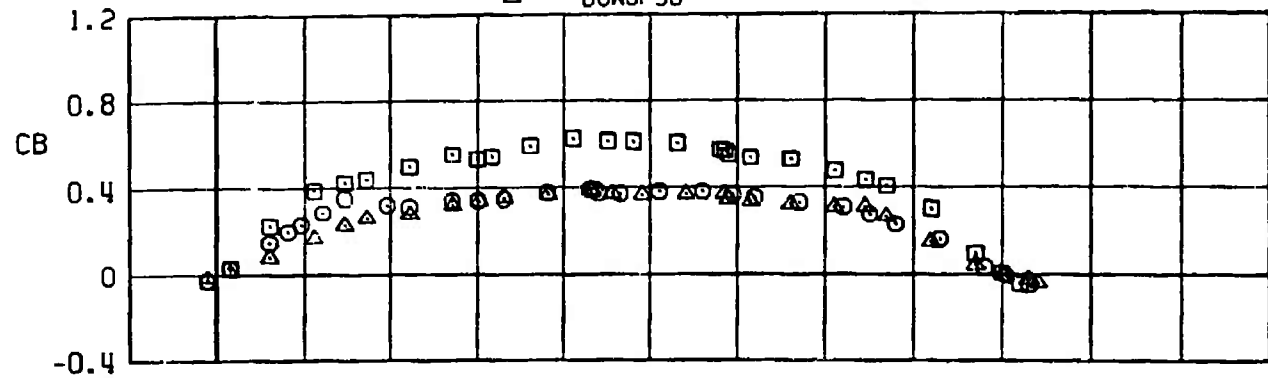
a. CNF versus α

Figure 19. Test No. 2, comparison of aerodynamic coefficients of configurations BOWOF14, BOWOF11, and BOWOF36 at $M_\infty = 0.92$.

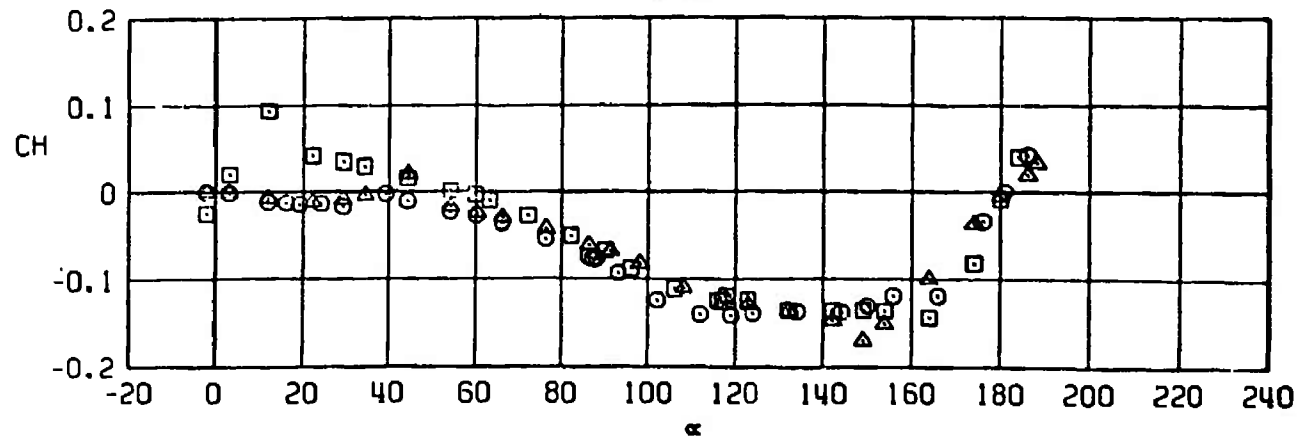
TEST CENTER AEDC TEST 2

CONFIG

- BOWOF 14
- BOWOF 11
- △ BOWOF 36



b. CB versus α



c. CH versus α

Figure 19. Concluded.

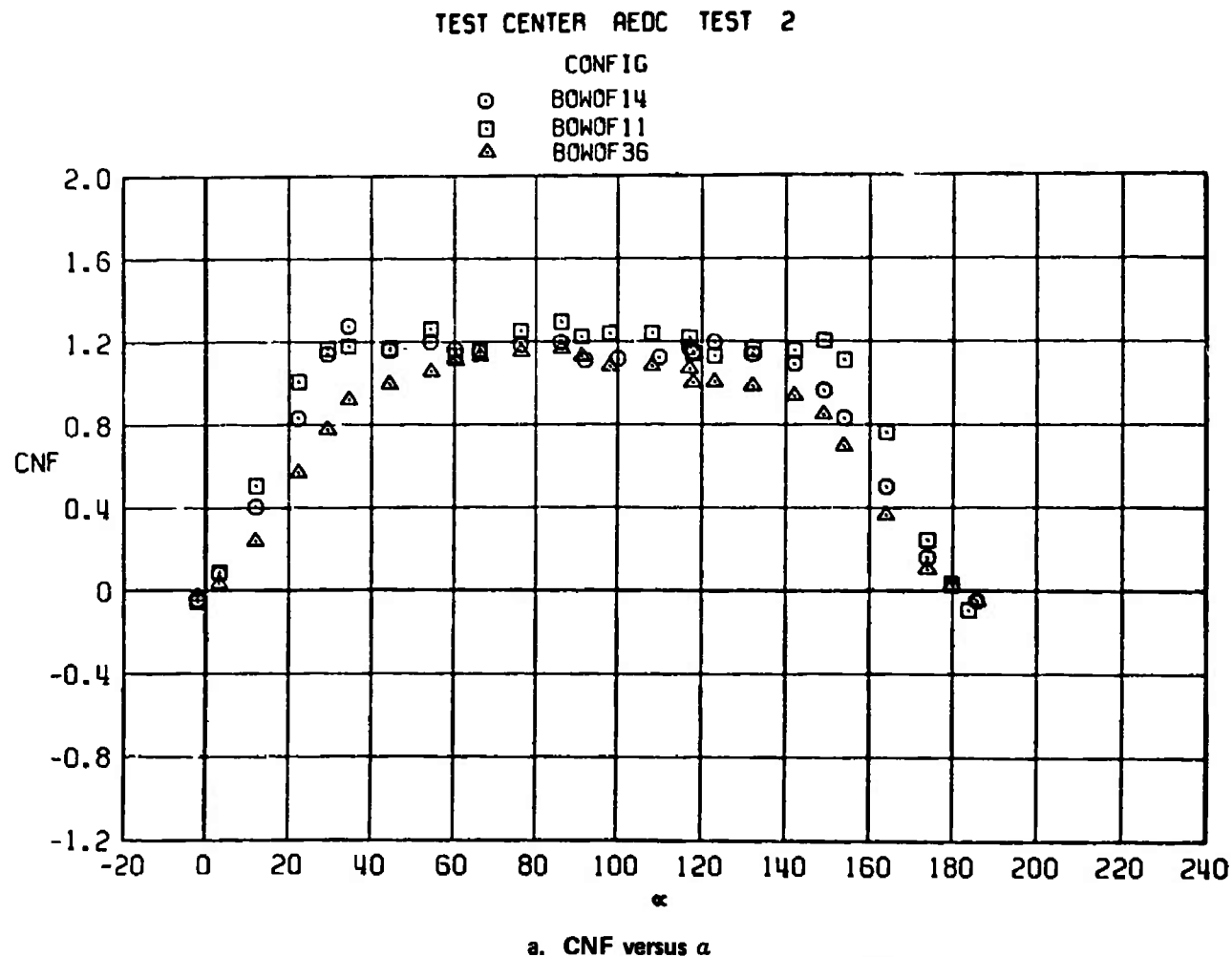
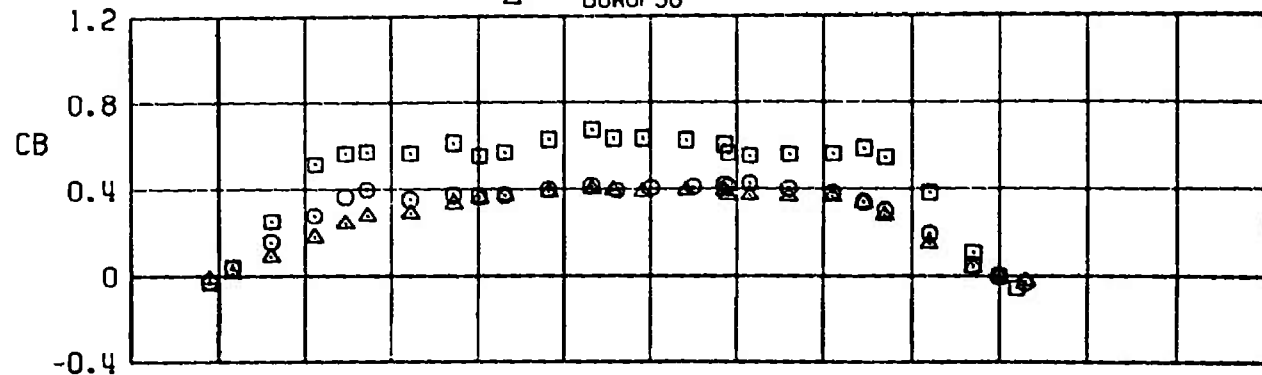


Figure 20. Test No. 2, comparison of aerodynamic coefficients of configurations BOWOF14, BOWOF11, and BOWOF36 at $M_\infty = 0.98$.

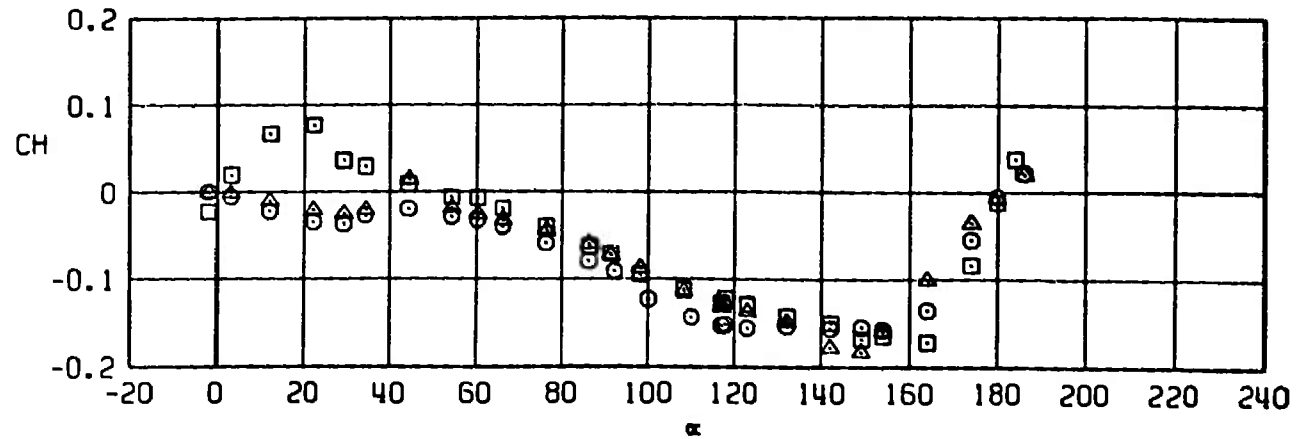
TEST CENTER AEDC TEST 2

CONFIG

- BOWOF14
- BOWOF11
- △ BOWOF36



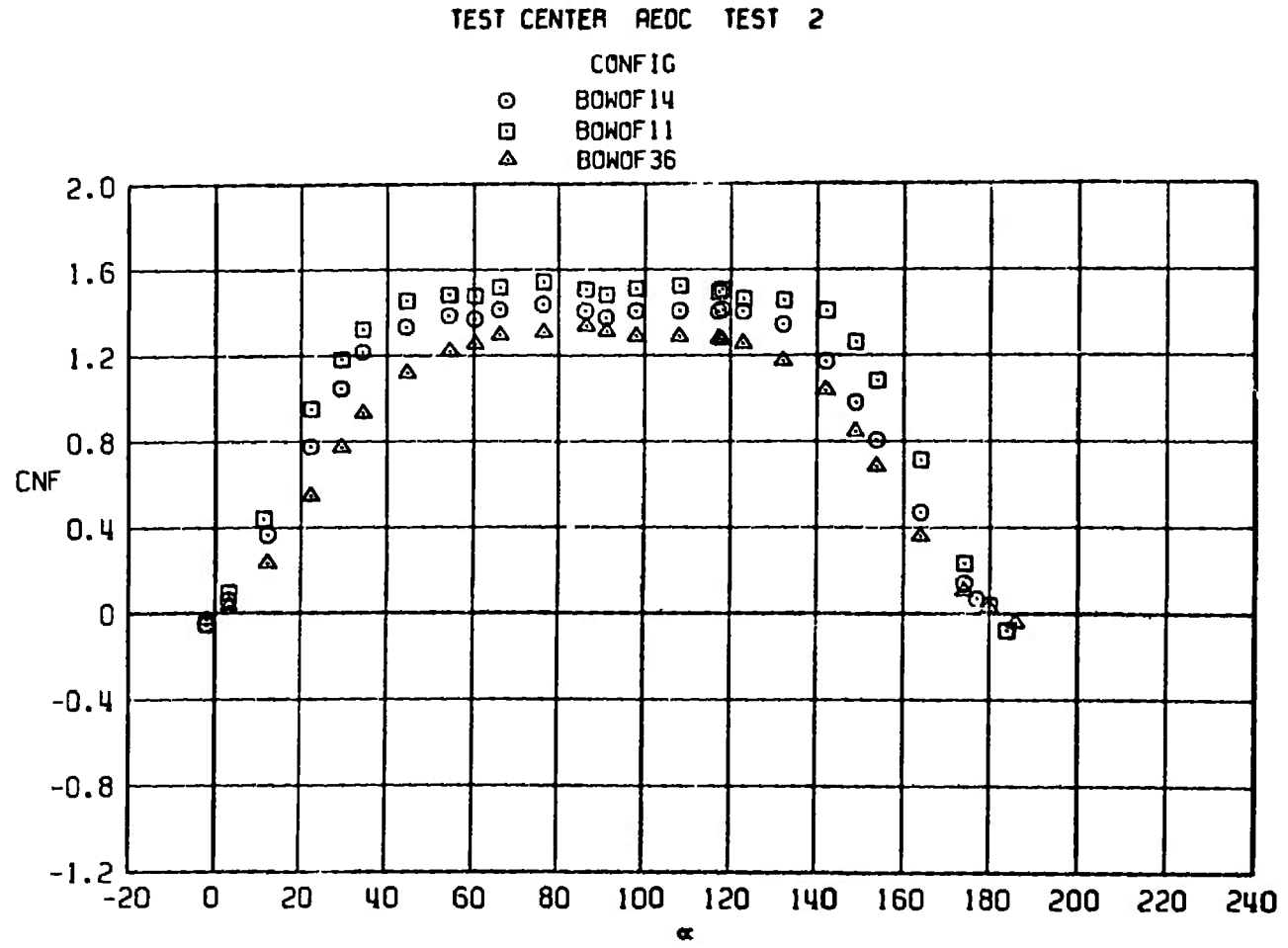
b. CB versus α



c. CH versus α

Figure 20. Concluded.

100



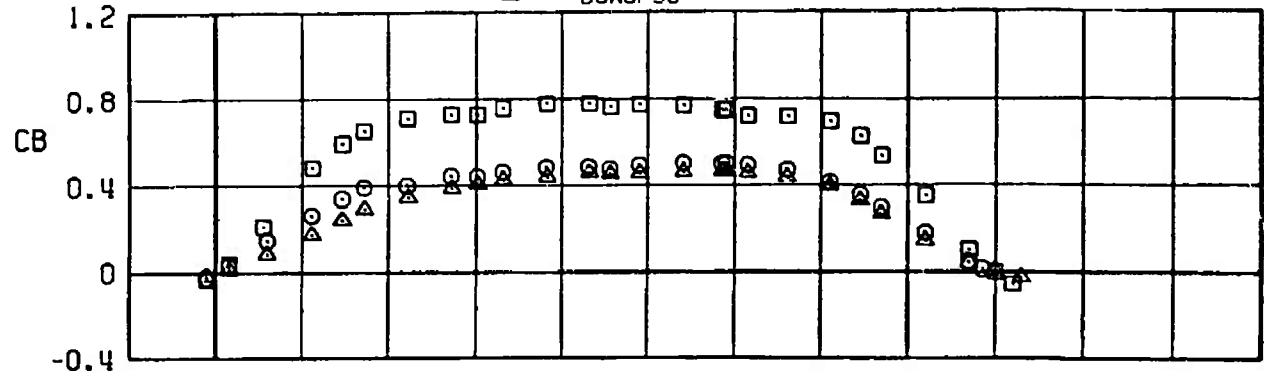
a. CNF versus α

Figure 21. Test No. 2, comparison of aerodynamic coefficients of configurations BOWOF14, BOWOF11, and BOWOF36 at $M_\infty = 1.1$.

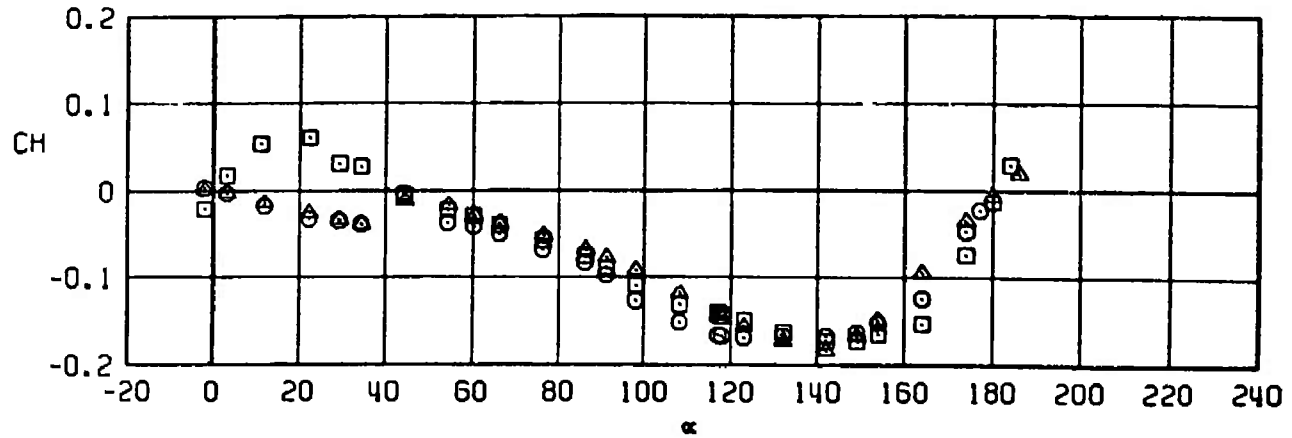
TEST CENTER AEDC TEST 2

CONFIG

- BOWOF14
- BOWOF11
- △ BOWOF36



b. CB versus α



c. CH versus α

Figure 21. Concluded.

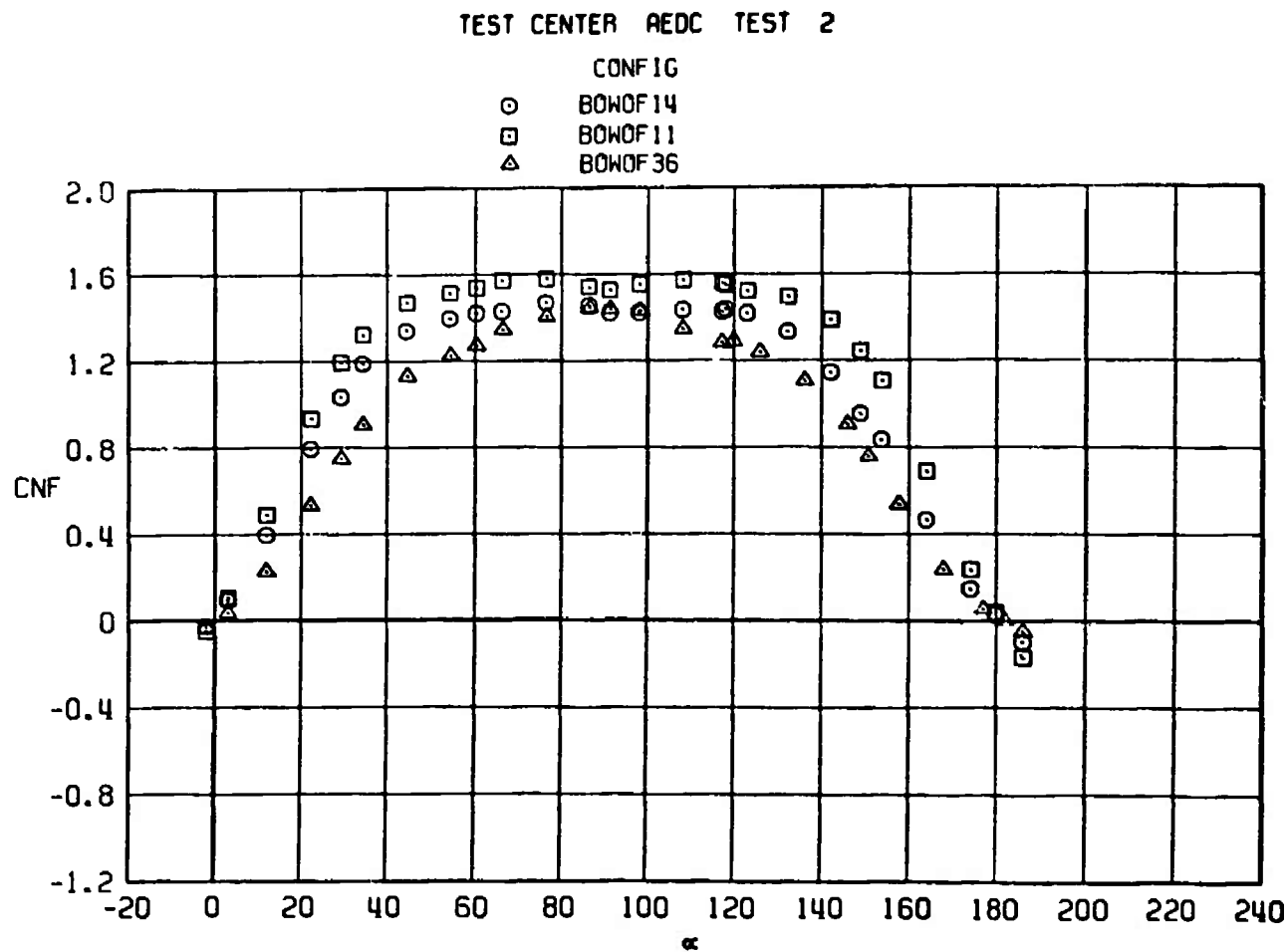
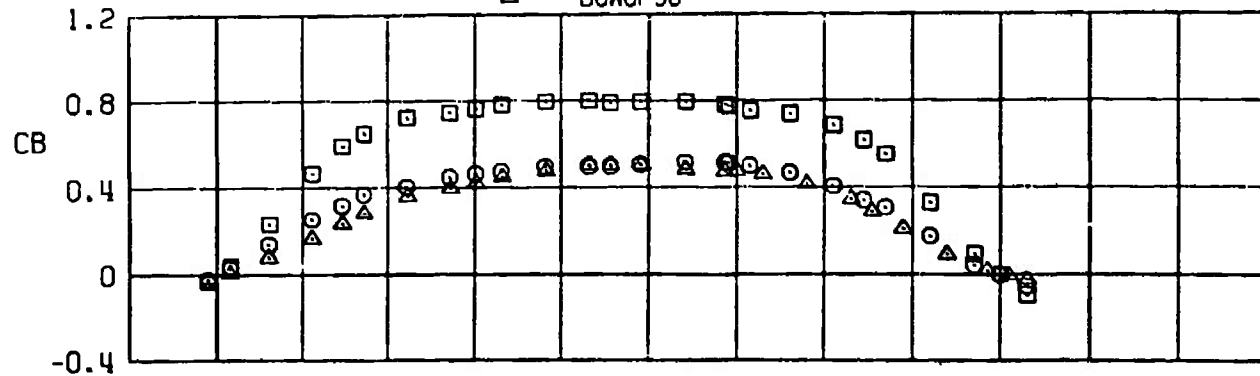
a. CNF versus α

Figure 22. Test No. 2, comparison of aerodynamic coefficients of configurations BOWOF14, BOWOF11, and BOWOF36 at $M_\infty = 1.2$.

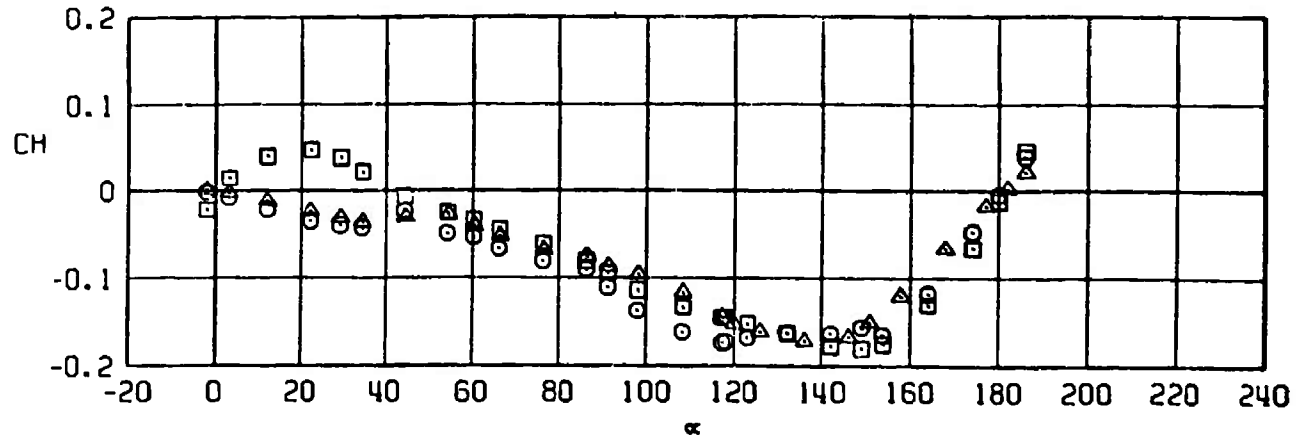
TEST CENTER AEDC TEST 2

CONF IG

- BOWOF 14
- BOWOF 11
- △ BOWOF 36



b. CB versus α



c. CH versus α

Figure 22. Concluded.

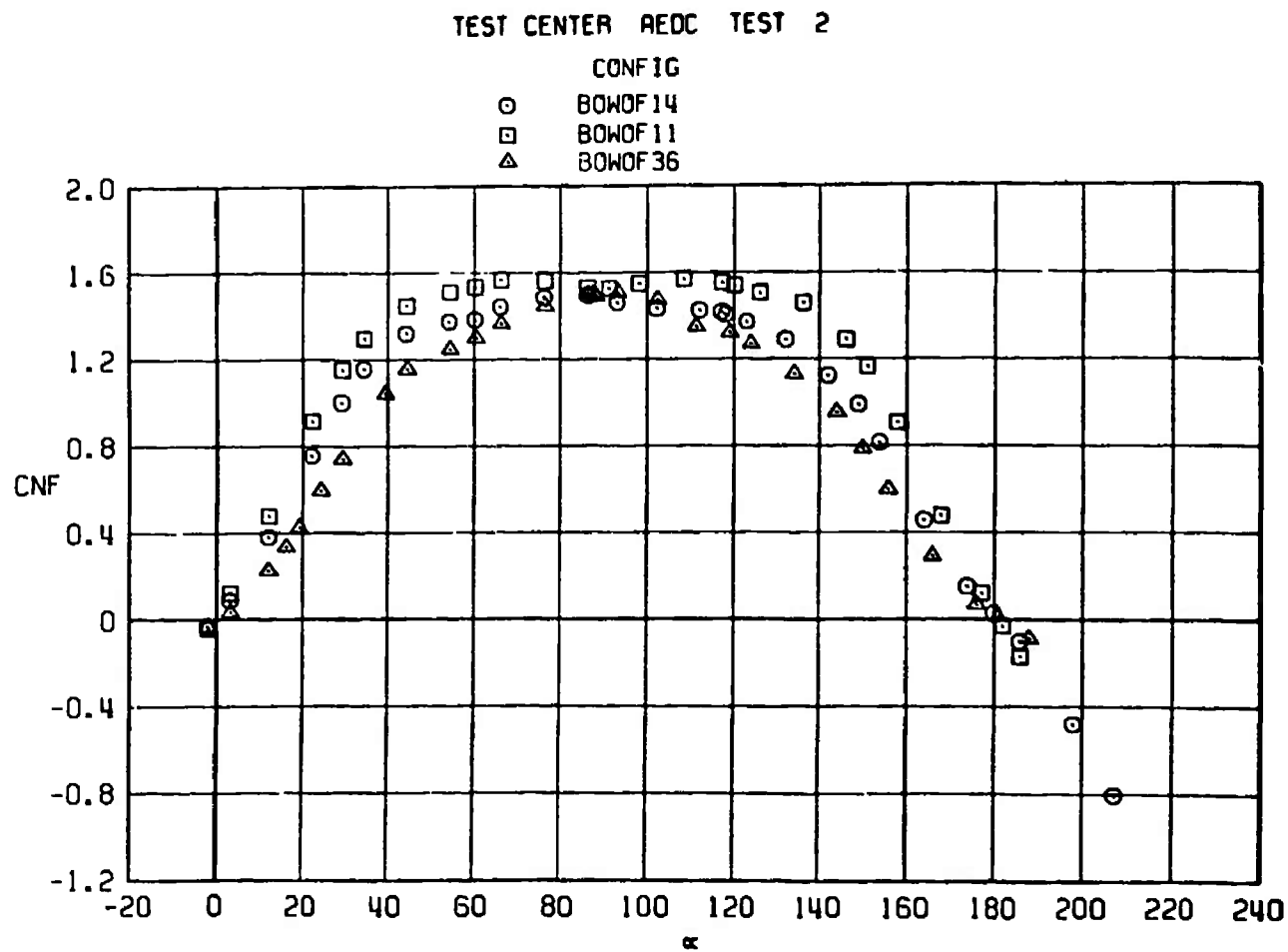
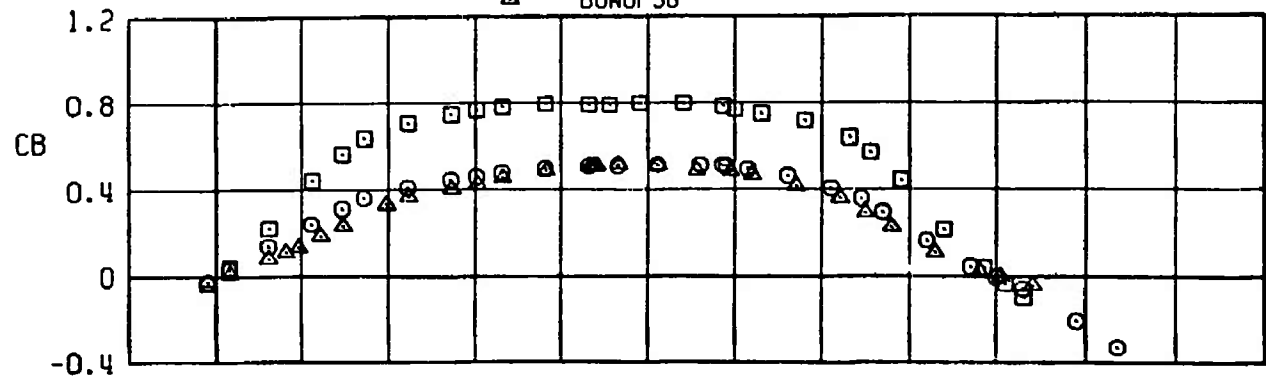


Figure 23. Test No. 2, comparison of aerodynamic coefficients of configurations BOWOF14, BOWOF11, and BOWOF36 at $M_\infty = 1.3$.

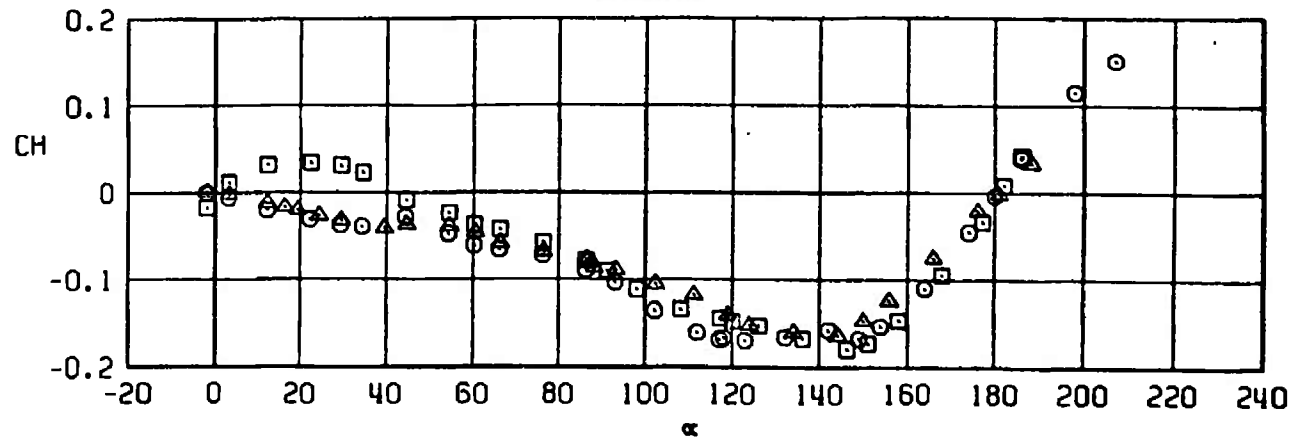
TEST CENTER AEDC TEST 2

CONFIG

- BOWOF14
- BOWOF11
- △ BOWOF36



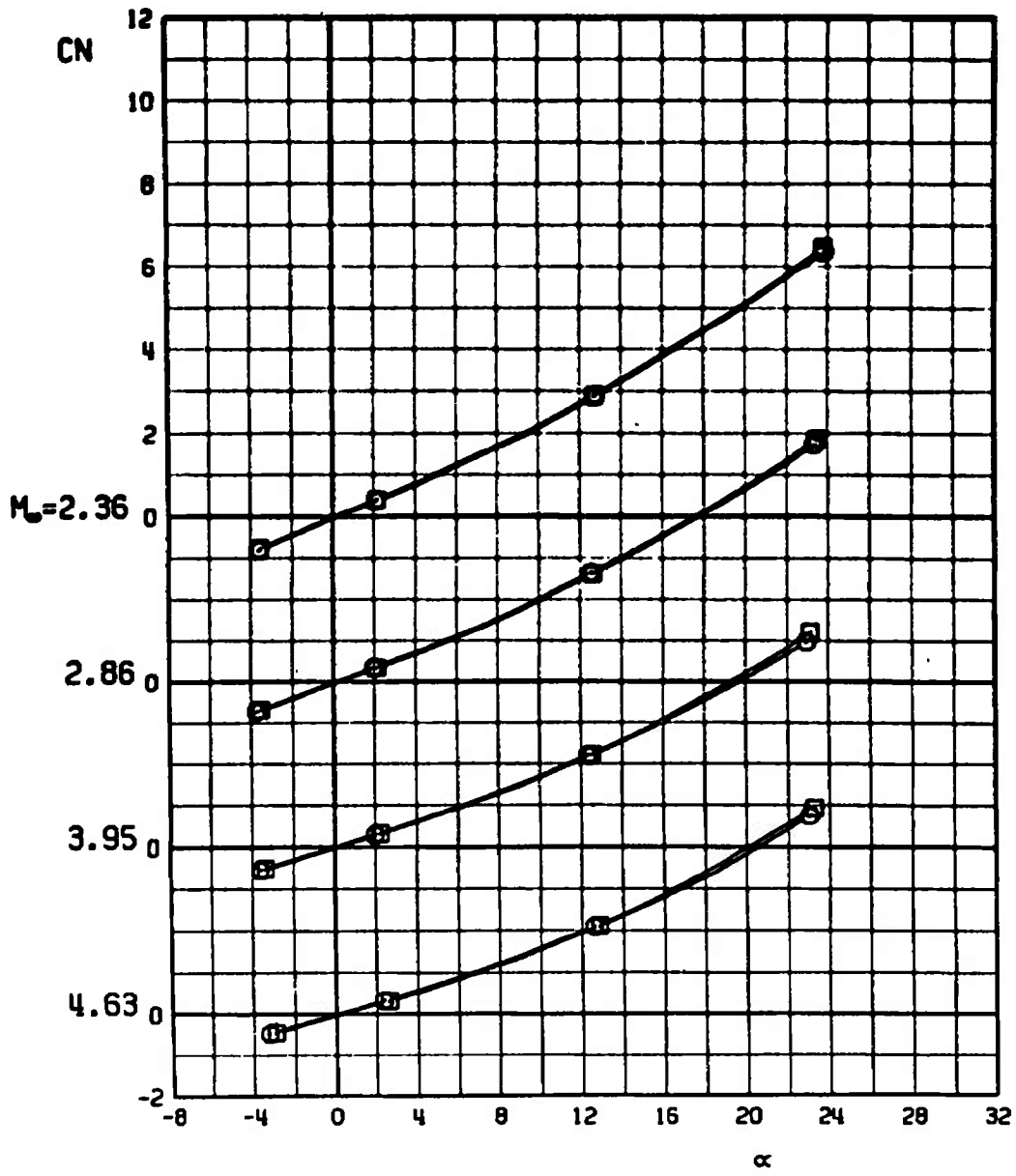
b. CB versus α



c. CH versus α

Figure 23. Concluded.

		TEST CENTER		LAC		TEST 3		
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	
○	B1W0F35	0	0	0	0	0	0	0
□	B1W0F35	0	0	0	0	0	45	45

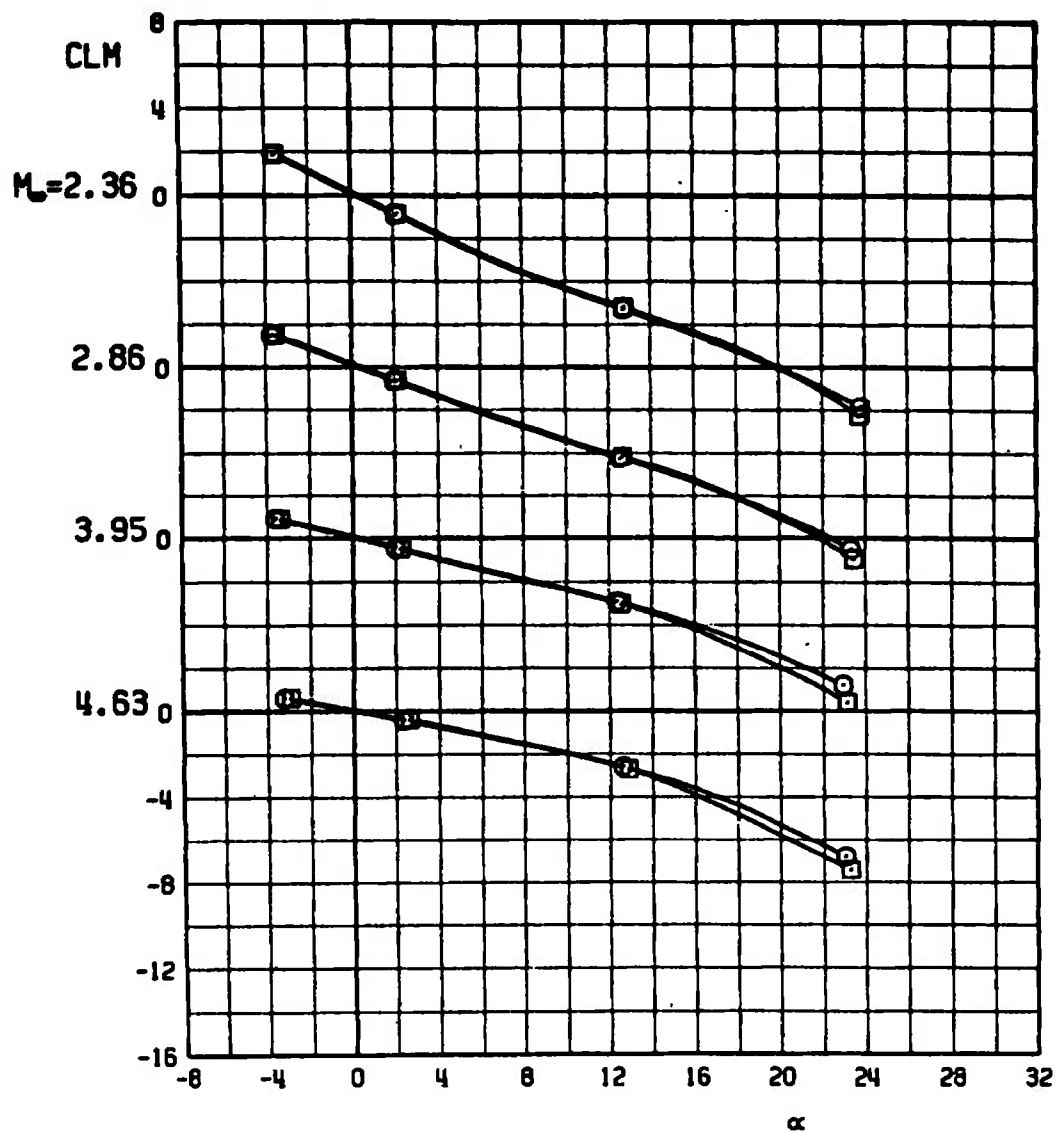


a. CN versus α

Figure 24. Test No. 3, comparison of aerodynamic coefficients of configuration B1W0F35 at roll angles of 0 and 45 deg.

TEST CENTER LRC TEST 3

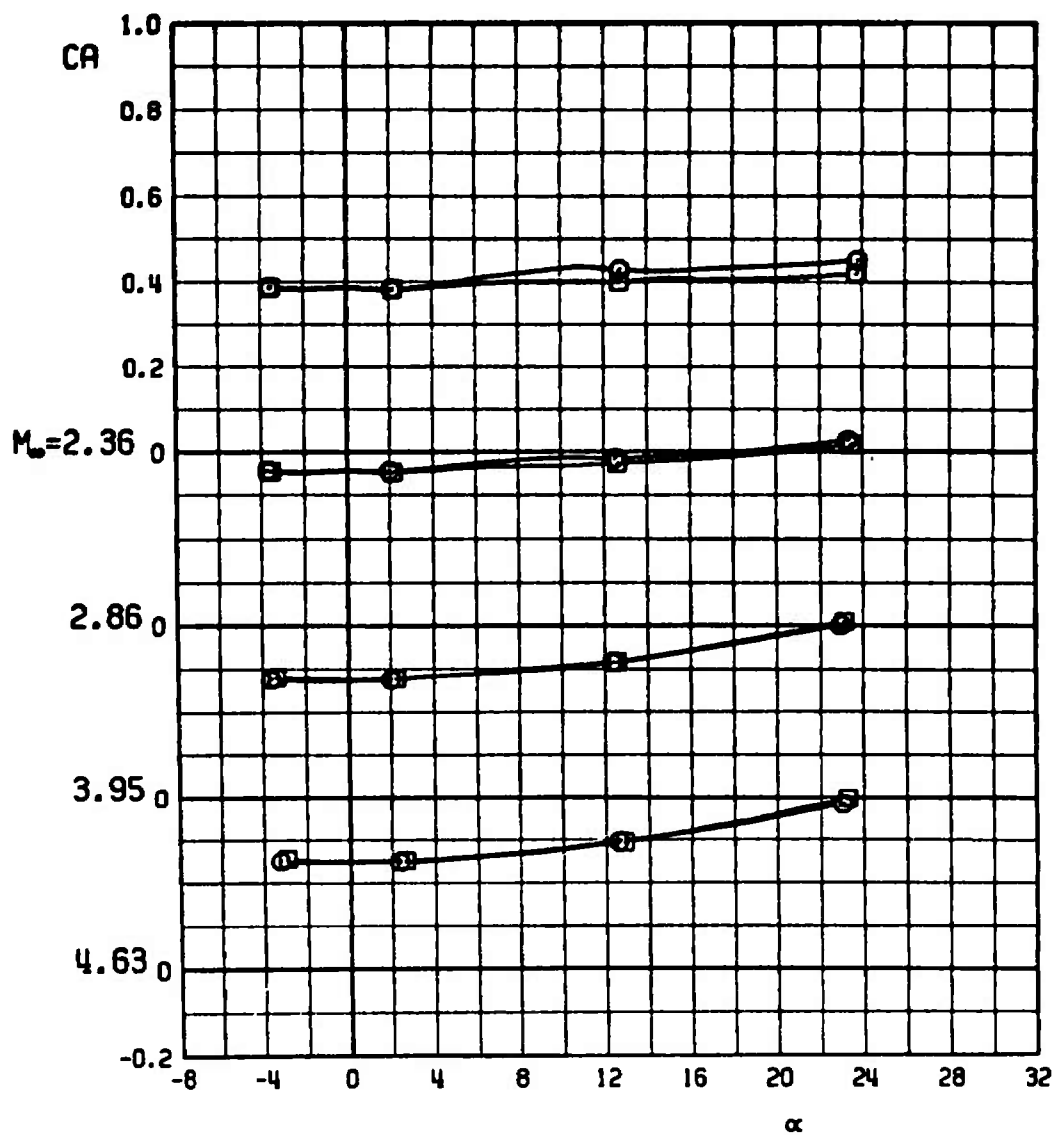
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF35	0	0	0	0	0	0
□	BIWOF35	0	0	0	0	0	45



b. CLM versus α
Figure 24. Continued.

TEST CENTER LAC TEST 3

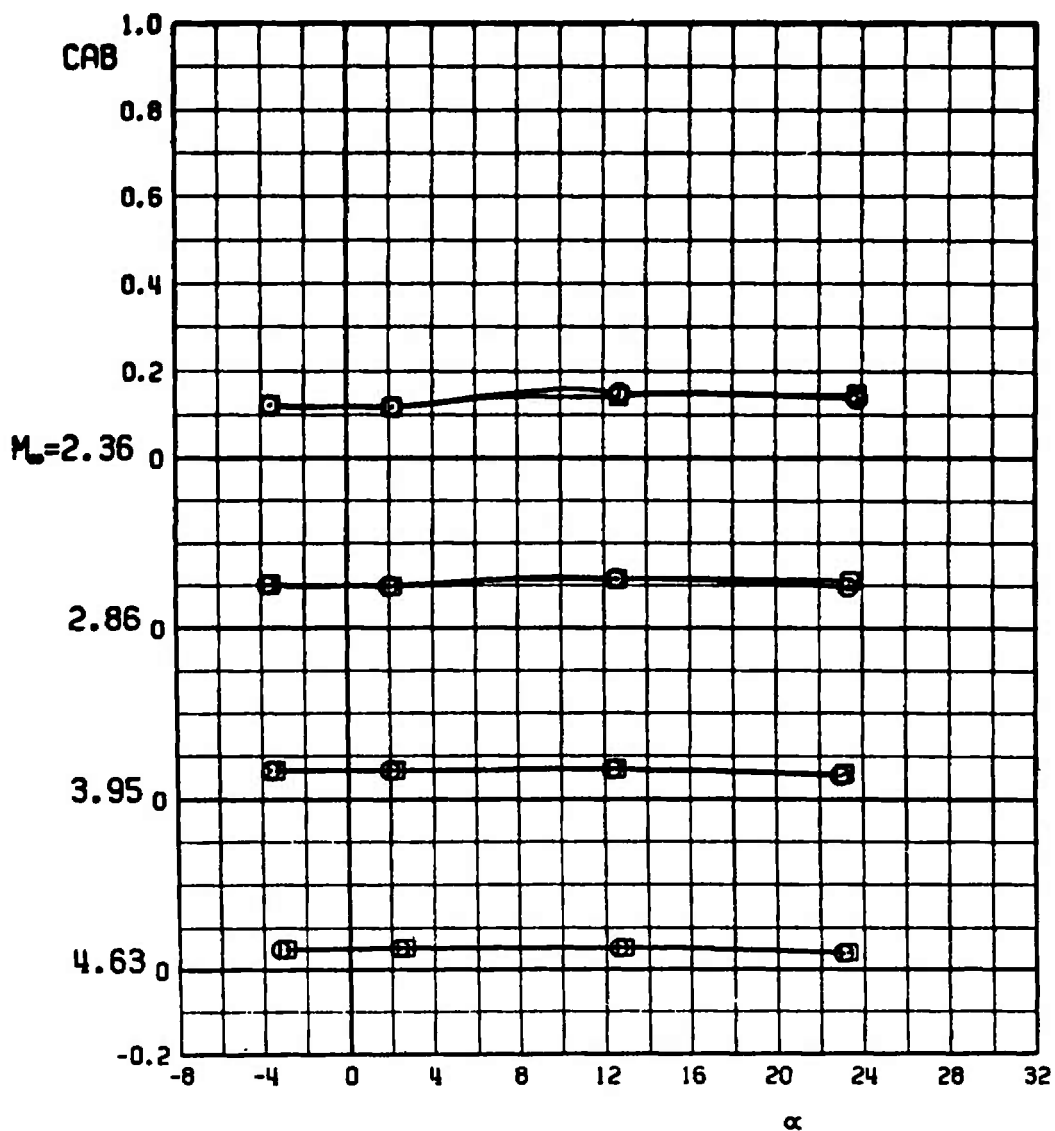
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF35	0	0	0	0	0	0
□	B1WOF35	0	0	0	0	0	45



c. CA versus α
Figure 24. Continued.

TEST CENTER LRC TEST 3

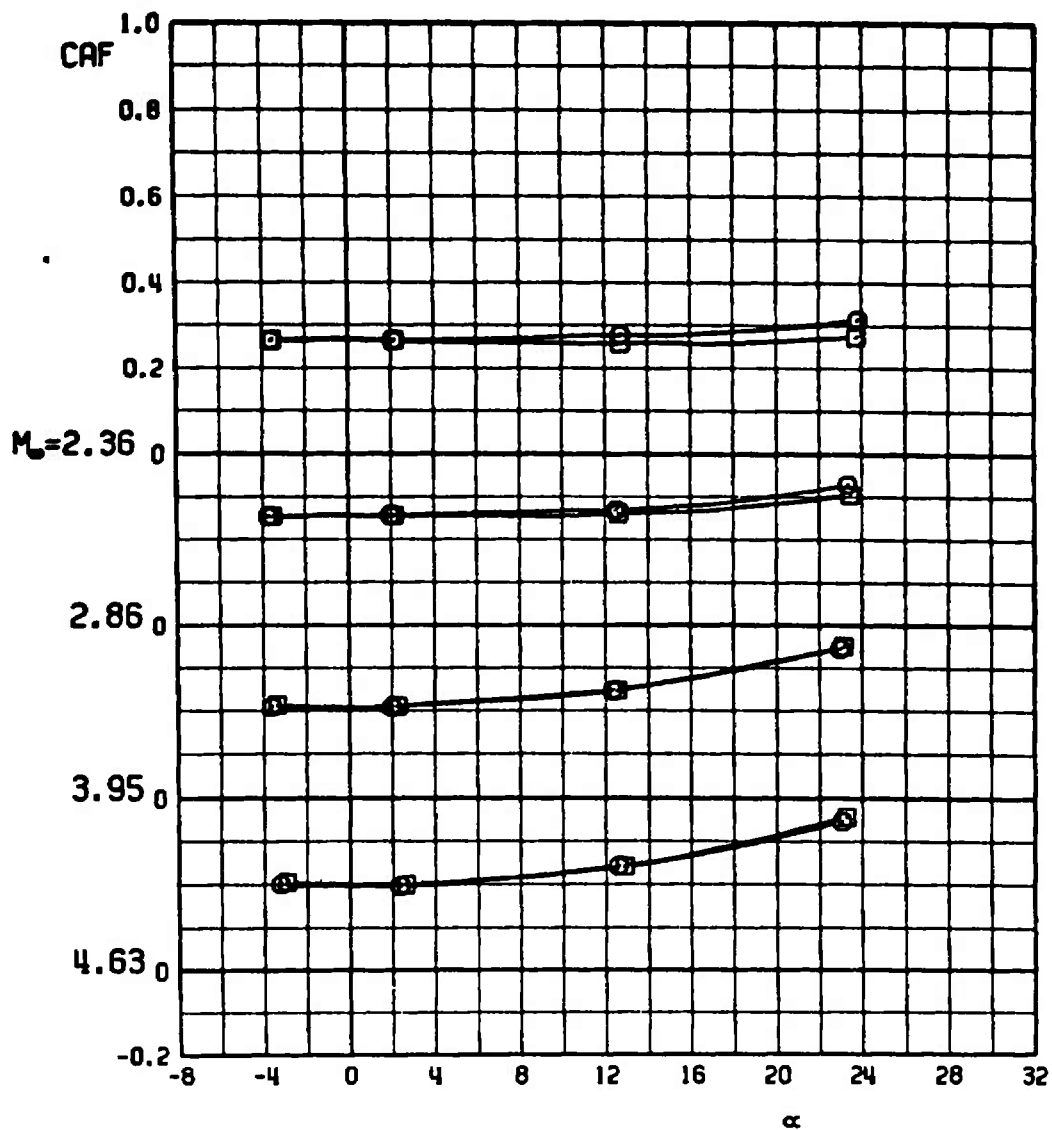
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF35	0	0	0	0	0	0
□	B1WOF35	0	0	0	0	0	45



d. CAB versus α
Figure 24. Continued.

TEST CENTER LRC TEST 3

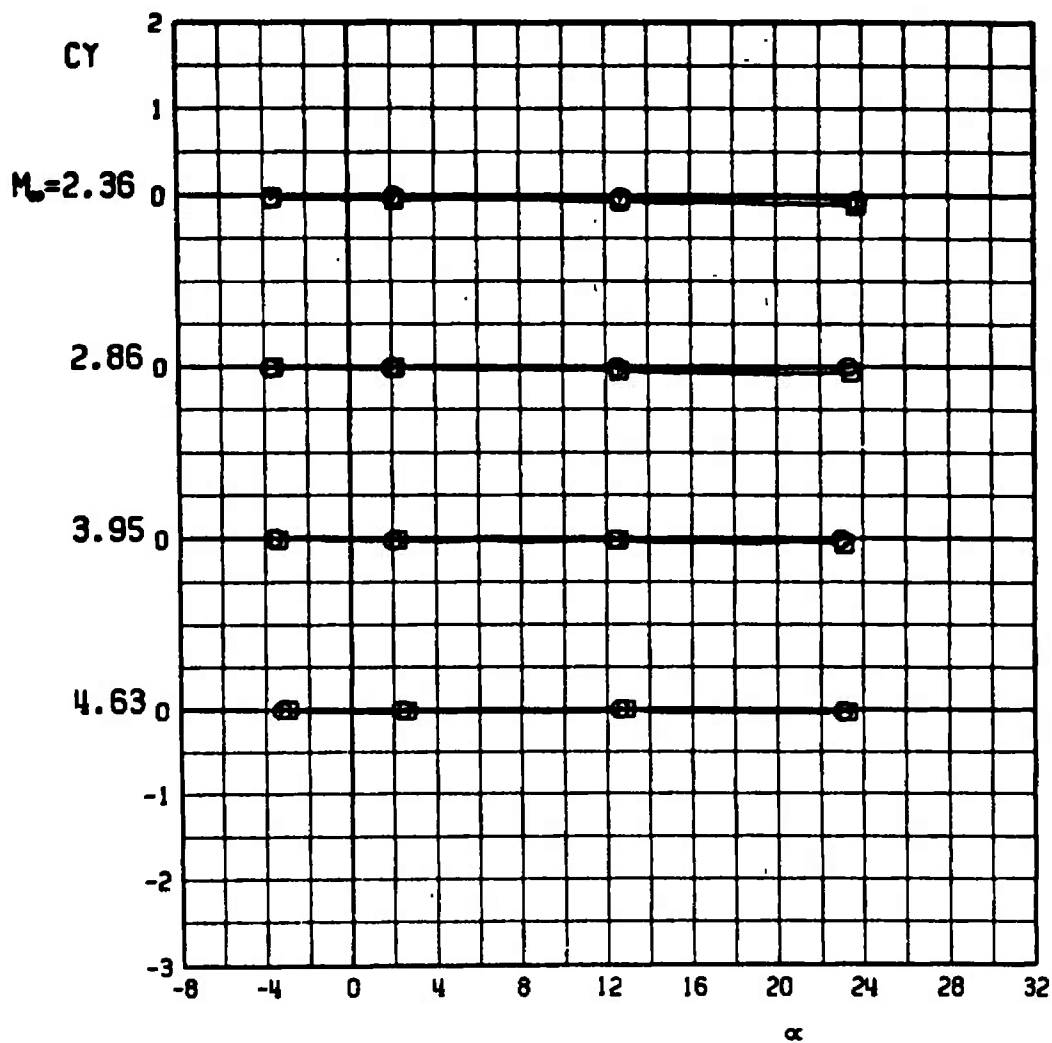
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B1WOF35	0	0	0	0	0	0
⊠	B1WOF35	0	0	0	0	0	45



e. CAF versus α
Figure 24. Continued.

TEST CENTER LRC TEST 3

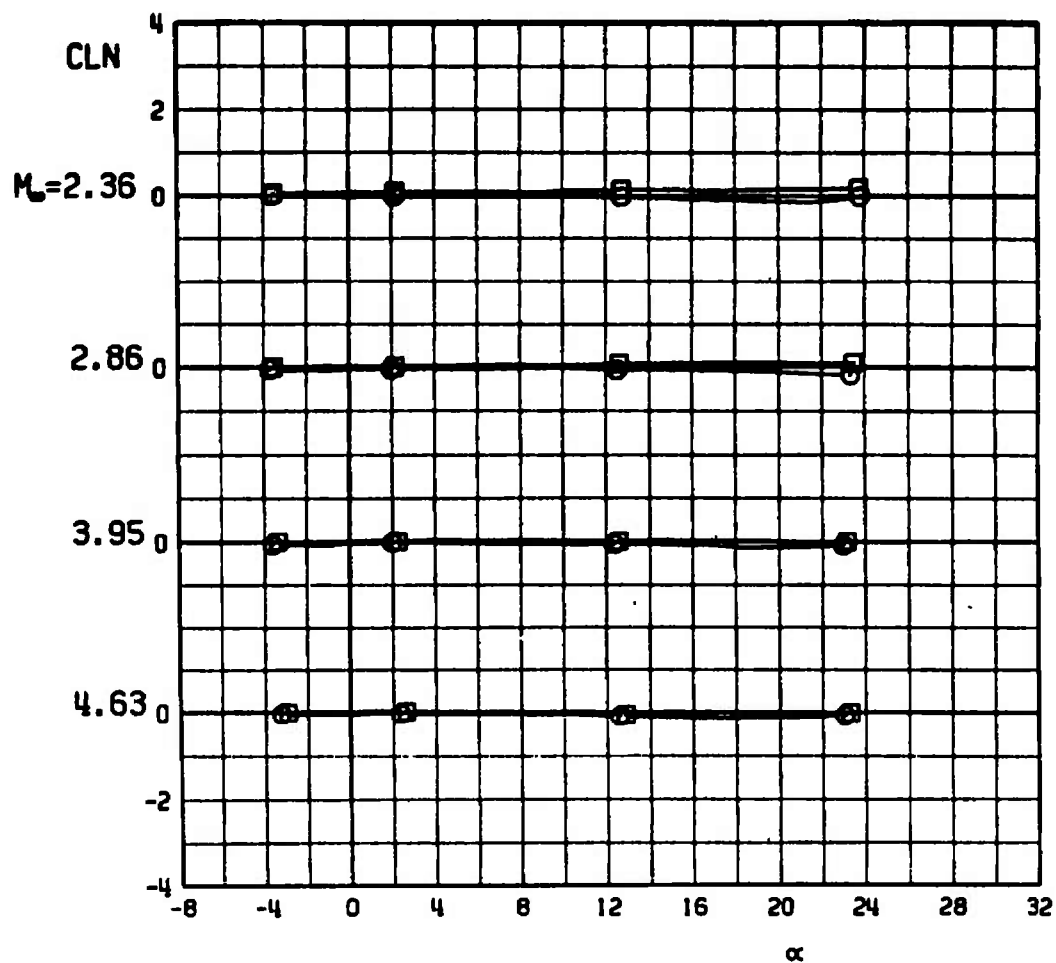
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF35	0	0	0	0	0	0
□	B1WOF35	0	0	0	0	0	45



f. C_Y versus α
Figure 24. Continued.

TEST CENTER LRC TEST 3

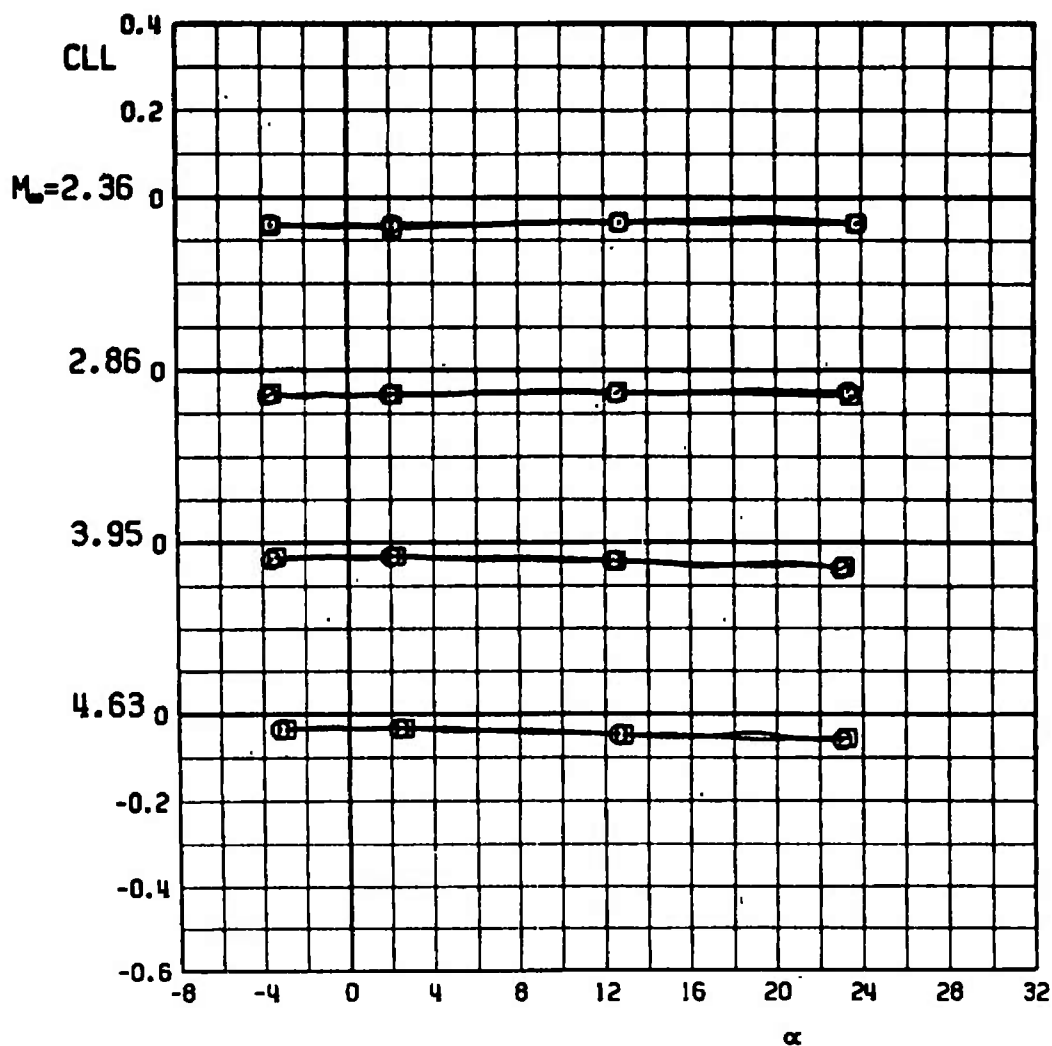
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF35	0	0	0	0	0	0
□	BIWOF35	0	0	0	0	0	45



g. CL_N versus α
Figure 24. Continued.

TEST CENTER LAC TEST 3

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF35	0	0	0	0	0	0
□	BIWOF35	0	0	0	0	0	45



h. CLL versus α
Figure 24. Concluded.

TEST CENTER LAC TEST 3

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F33	0	0	0	0	0	0
□	B1W0F33	0	0	0	0	0	45

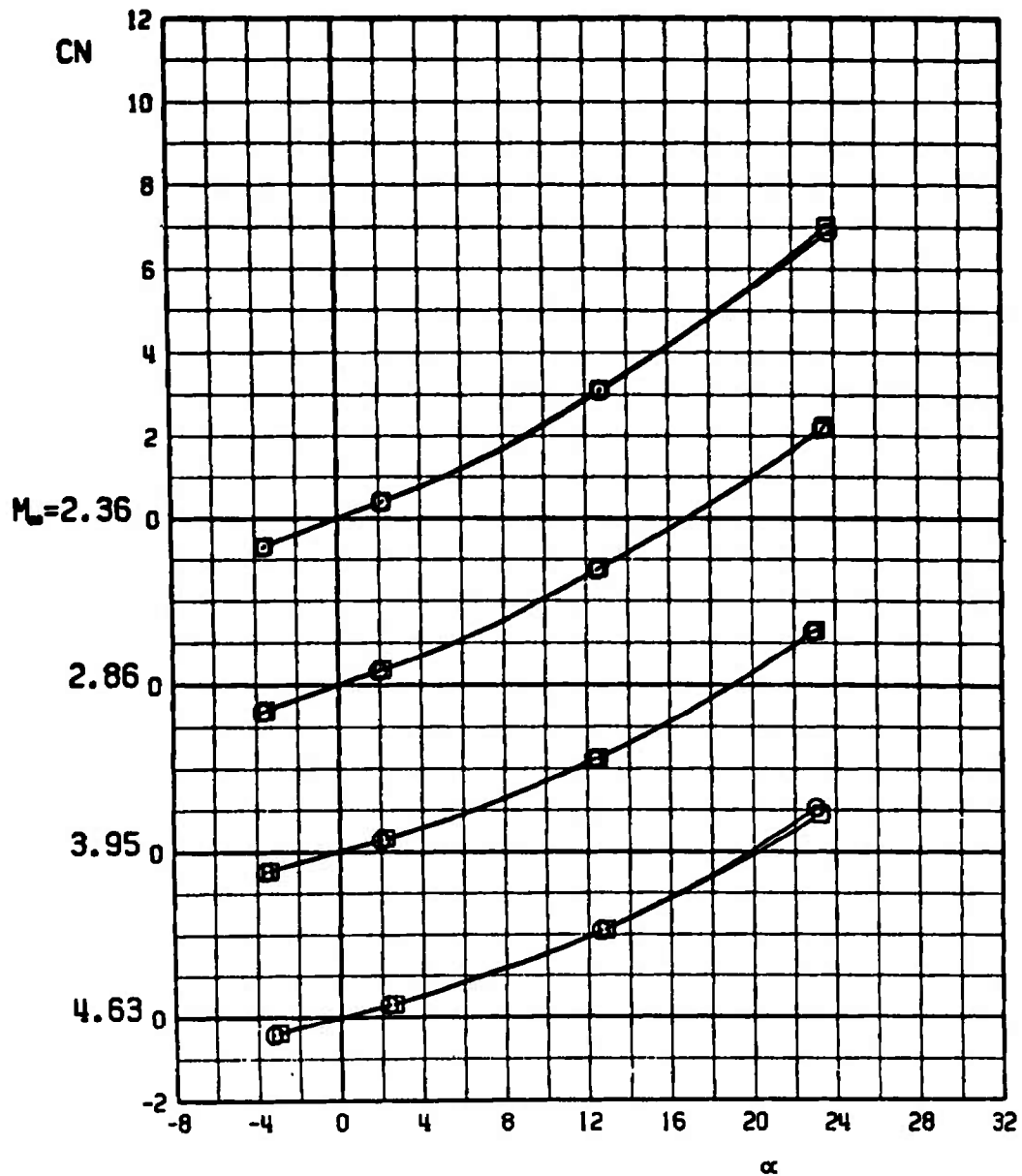
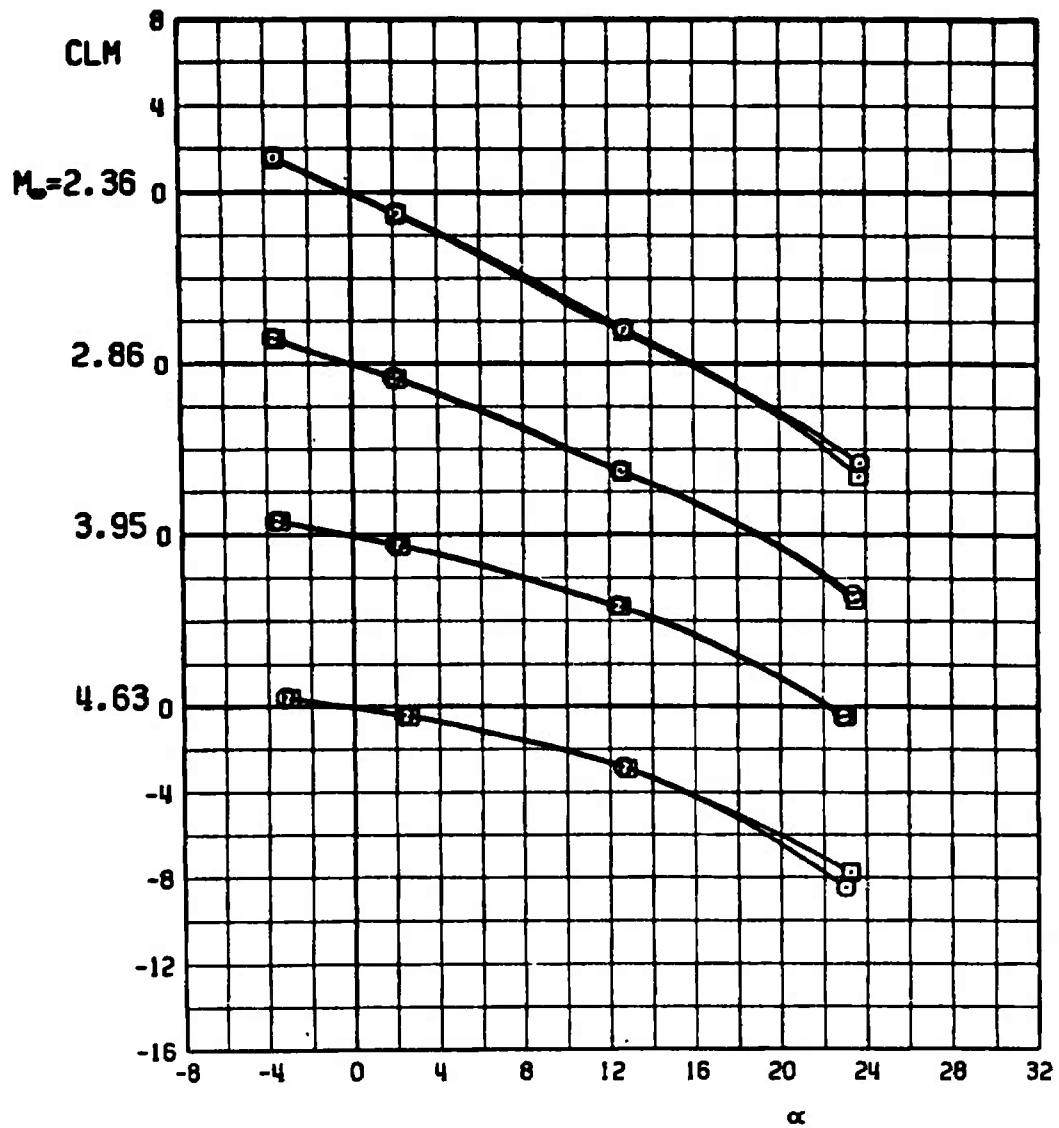
a. C_N versus α

Figure 25. Test No. 3, comparison of aerodynamic coefficients of configuration B1W0F33 at roll angles of 0 and 45 deg.

TEST CENTER LAC TEST 3

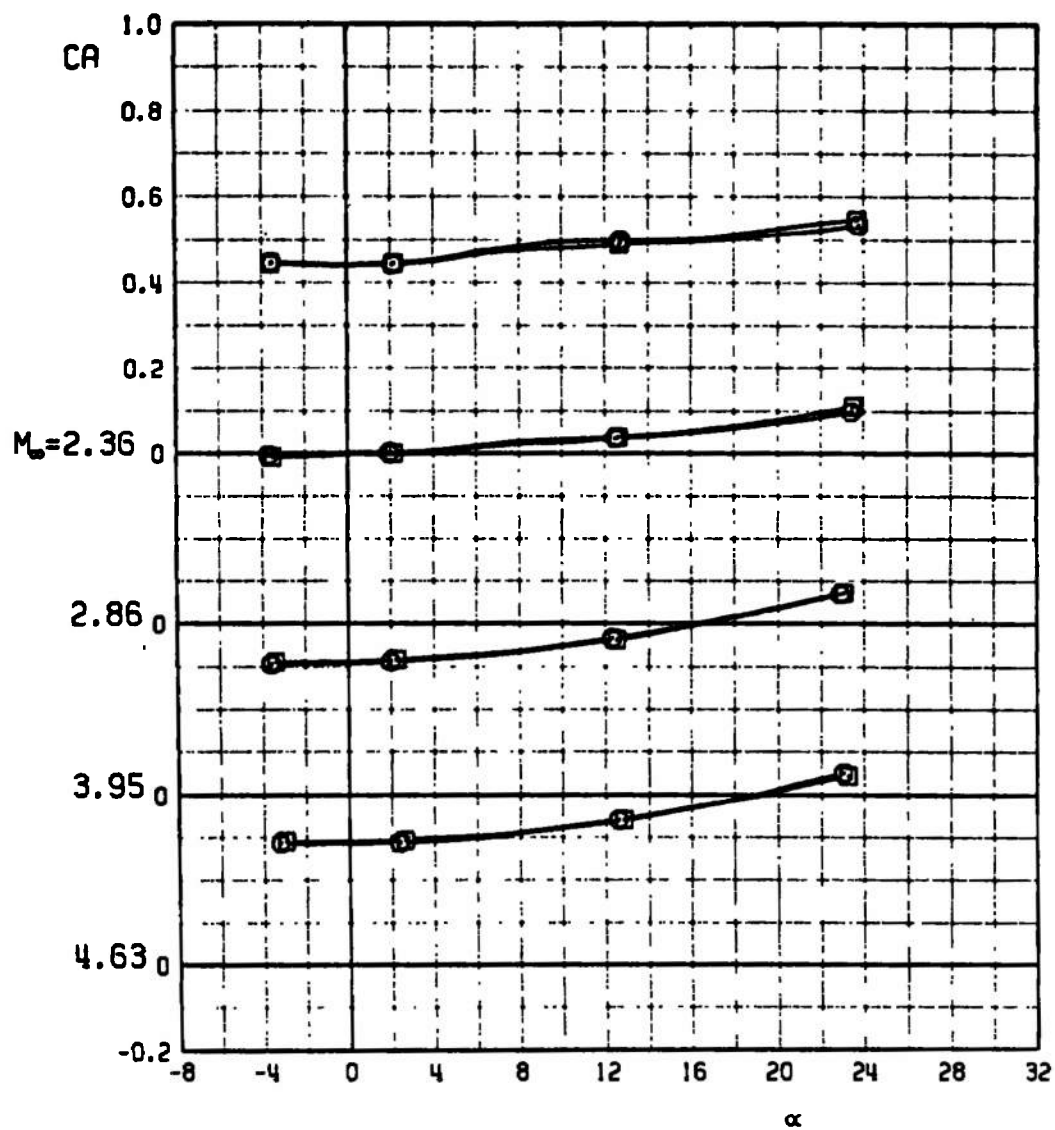
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF33	0	0	0	0	0	0
□	B1WOF33	0	0	0	0	0	45



b. CLM versus α
Figure 25. Continued.

TEST CENTER LRC TEST 3

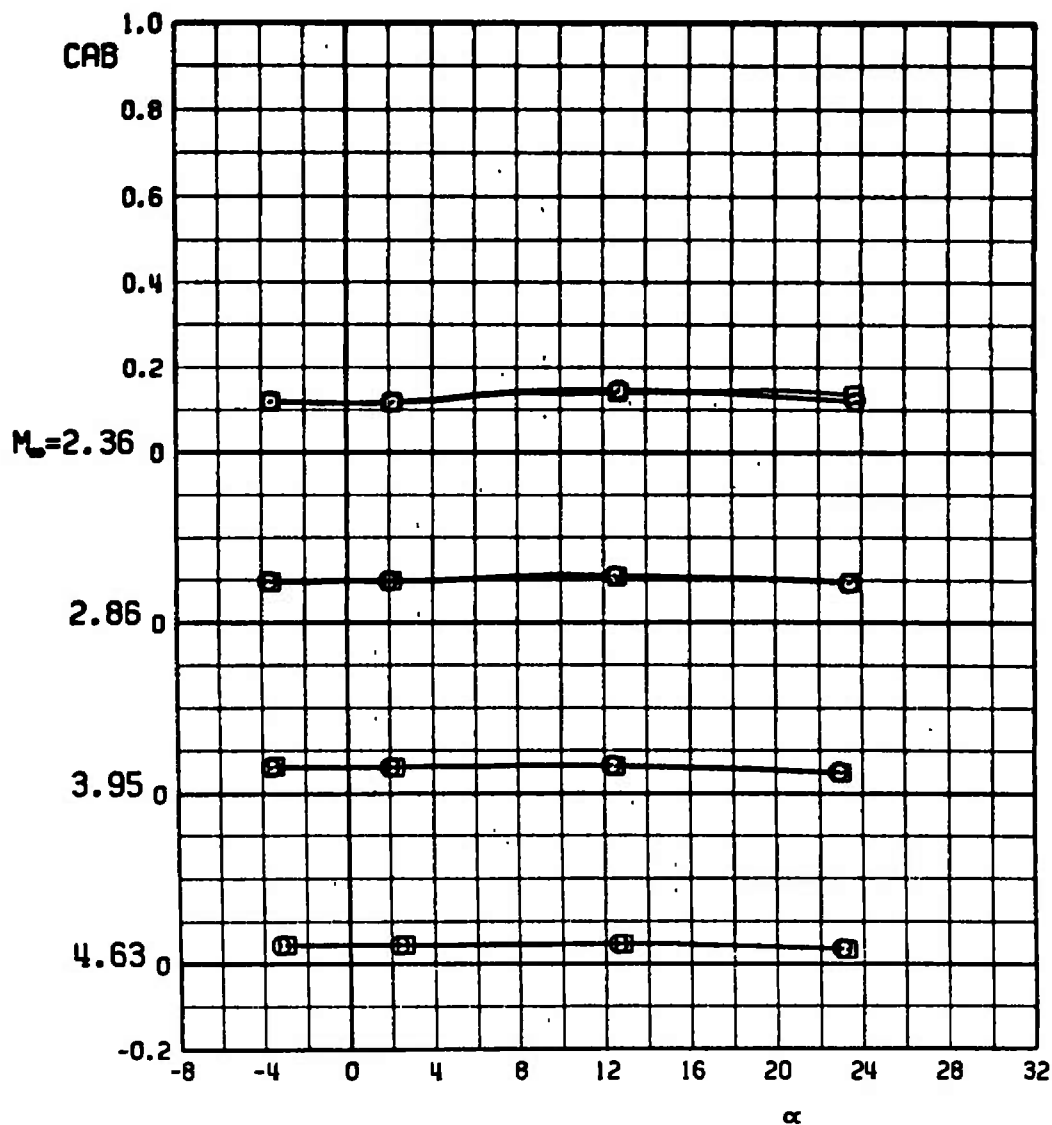
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF33	0	0	0	0	0	0
⊠	BIWOF33	0	0	0	0	0	45



c. CA versus α
Figure 25. Continued.

TEST CENTER, LRC TEST 3

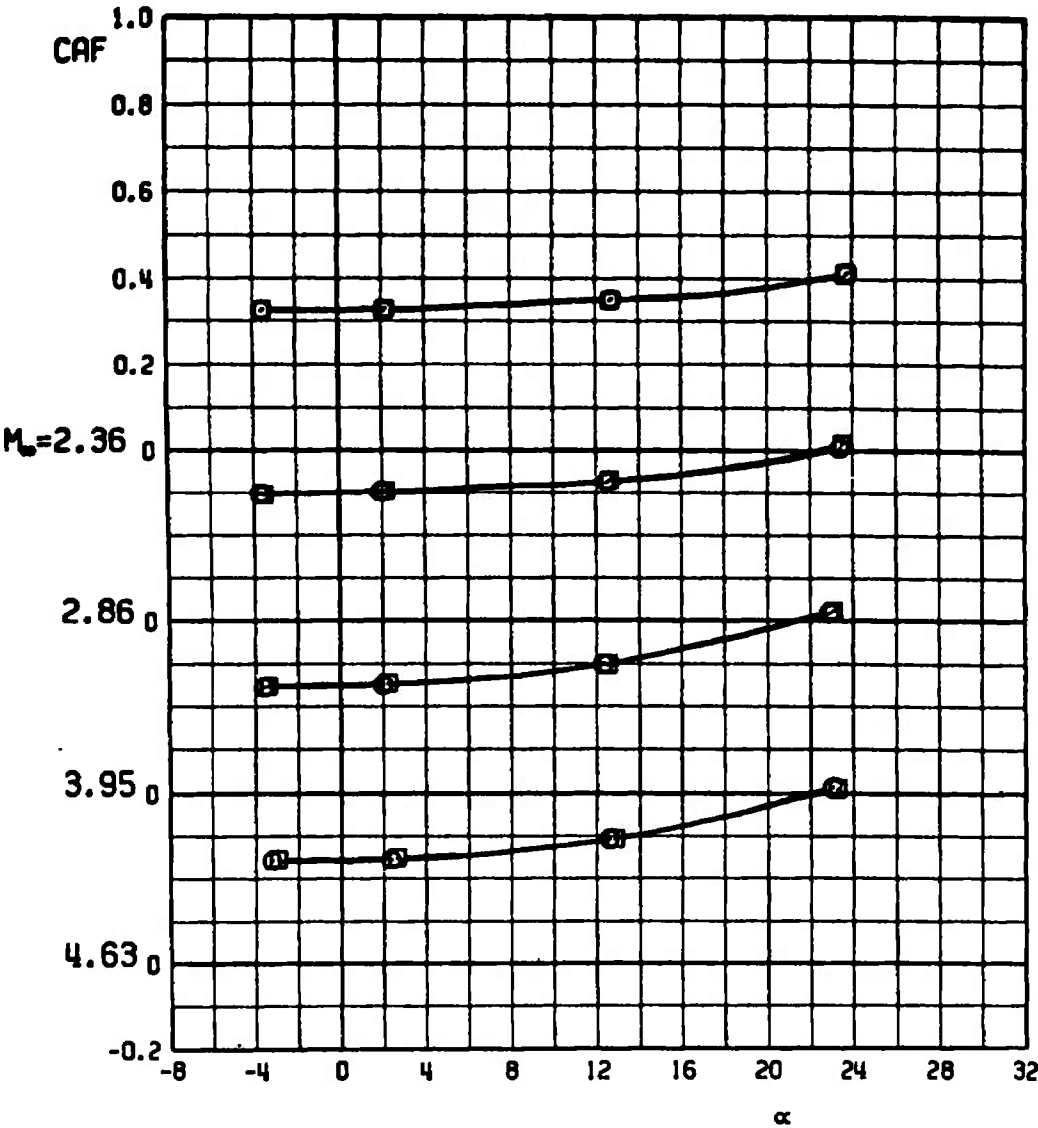
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF33	0	0	0	0	0	0
□	BIWOF33	0	0	0	0	0	45



d. CAB versus α
Figure 25. Continued.

TEST CENTER LAC TEST 3

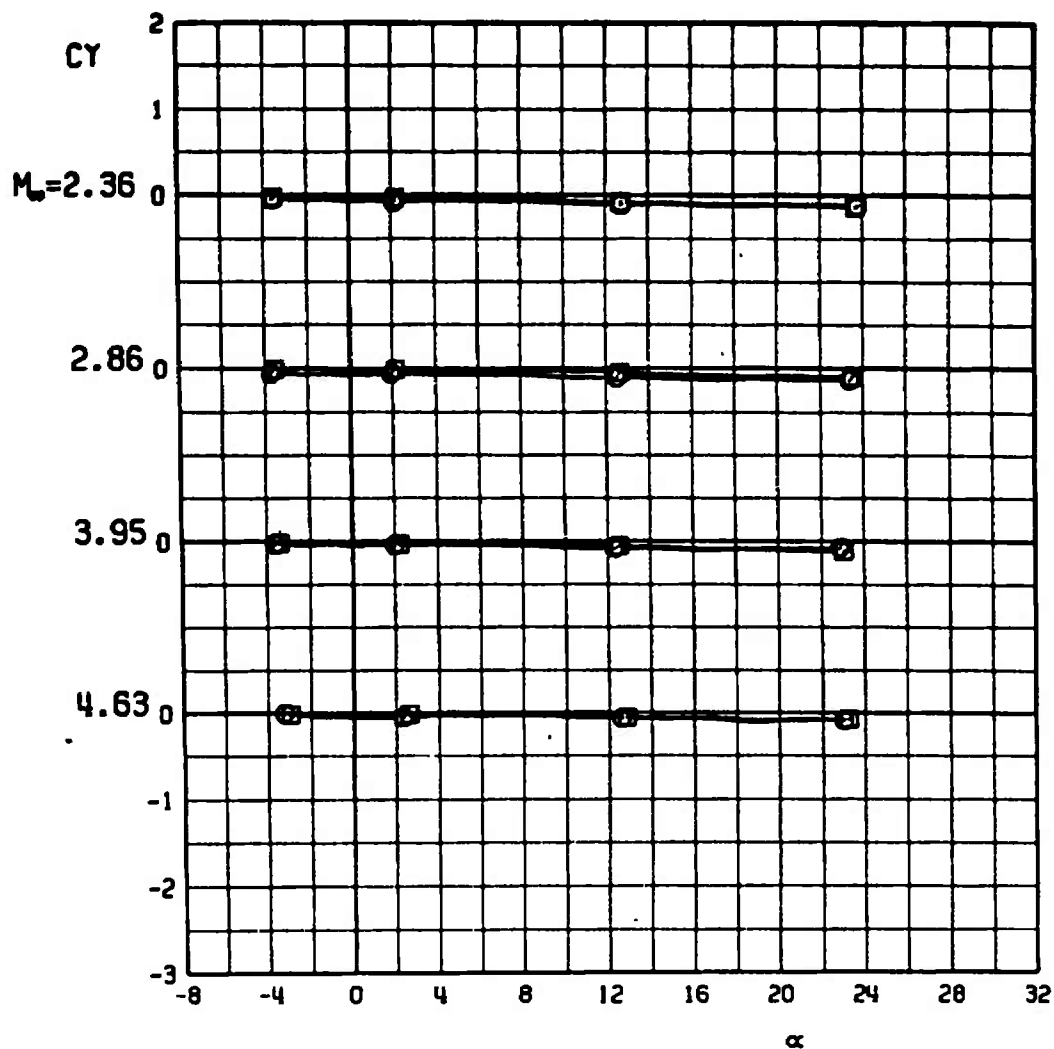
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF33	0	0	0	0	0	0
□	81WOF33	0	0	0	0	0	45



e. CAF versus α
Figure 25. Continued.

TEST CENTER LAC TEST 3

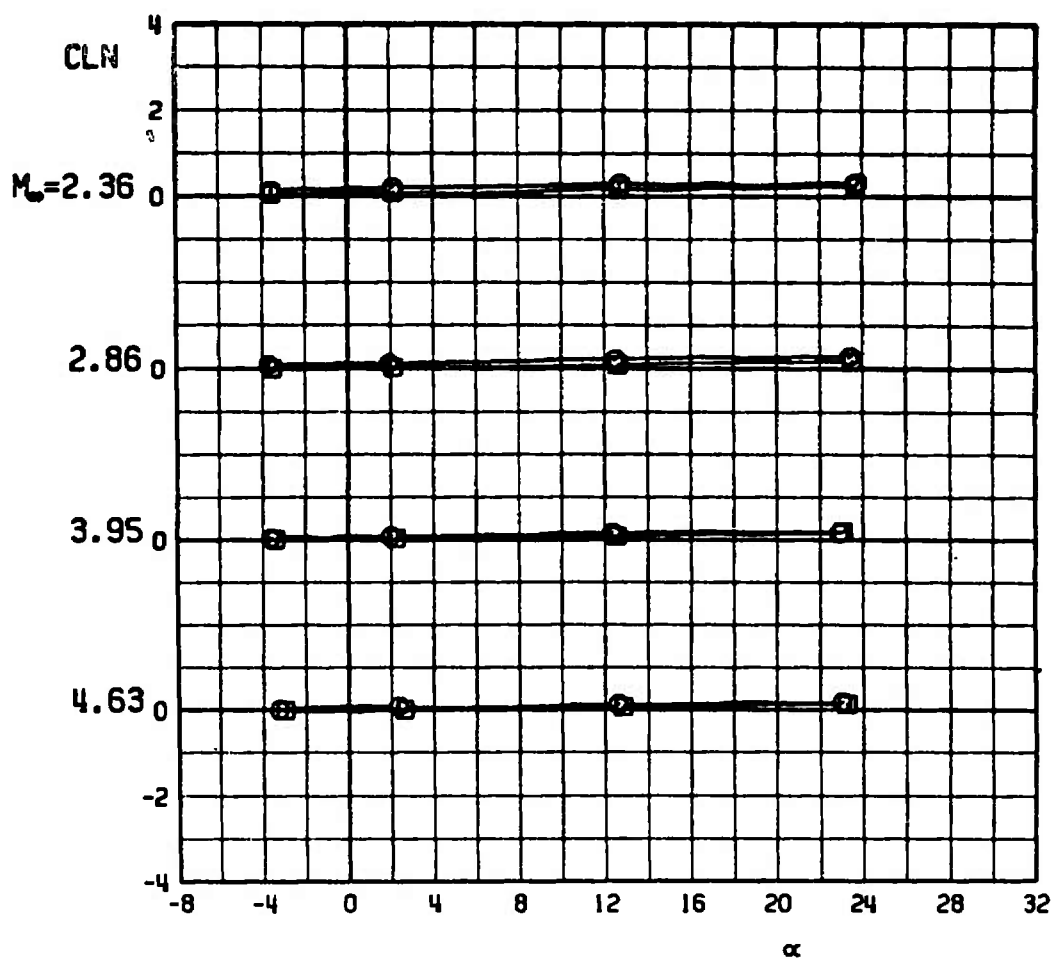
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF33	0	0	0	0	0	0
⊠	BIWOF33	0	0	0	0	0	45



f. CY versus α
Figure 25. Continued.

TEST CENTER LAC TEST 3

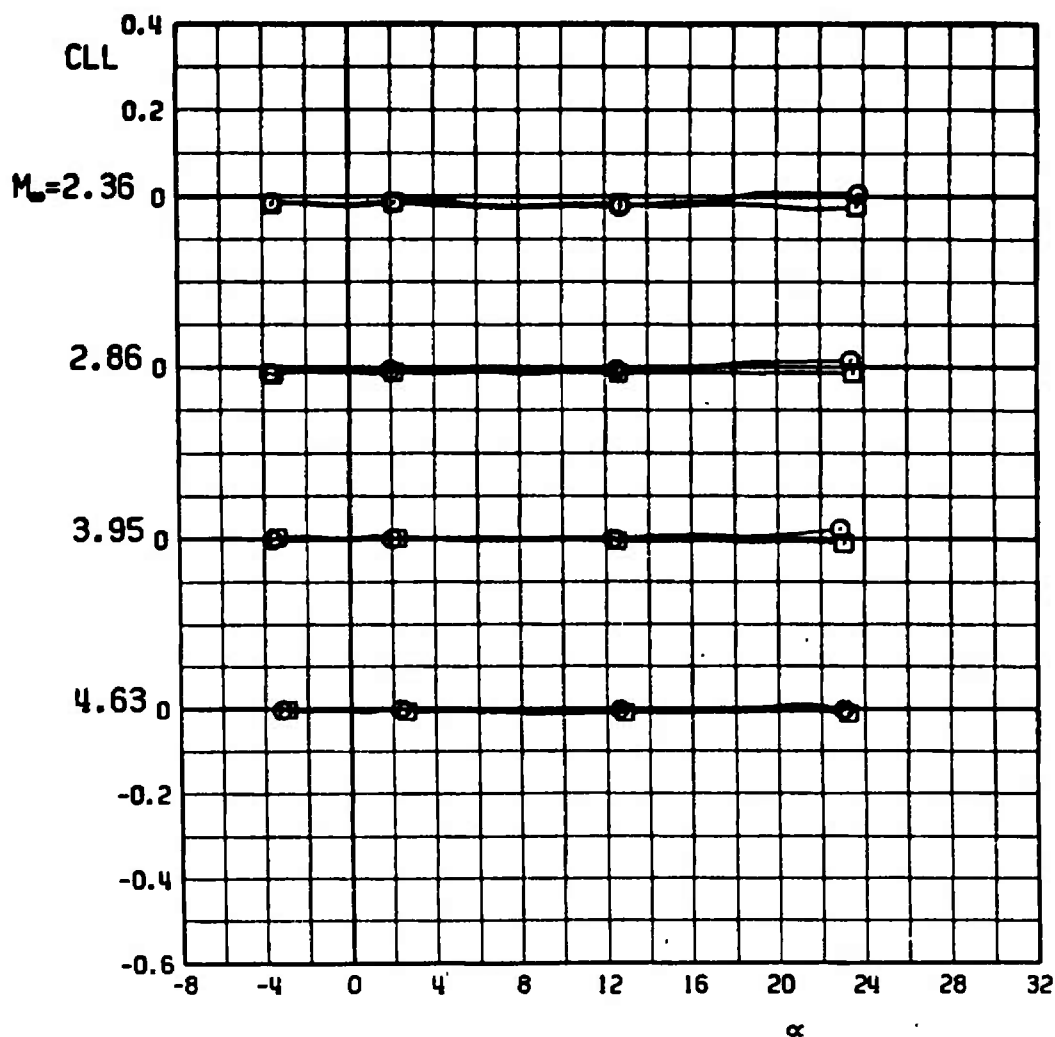
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF33	0	0	0	0	0	0
□	BIWOF33	0	0	0	0	0	45



g. CLN versus α
Figure 25. Continued.

TEST CENTER LAC TEST 3

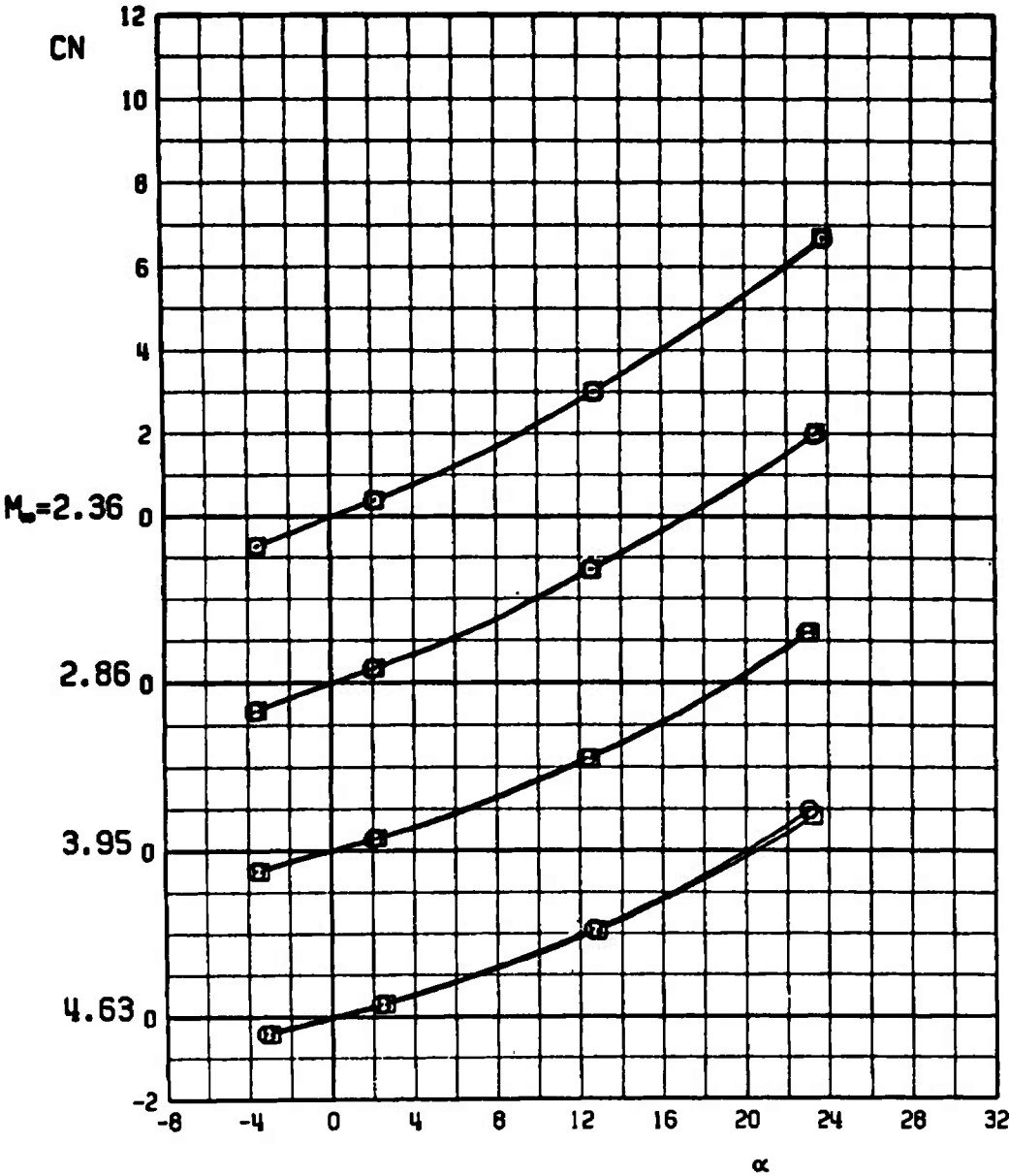
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF33	0	0	0	0	0	0
⊠	BIWOF33	0	0	0	0	0	45



h. CLL versus α
Figure 25. Concluded.

TEST CENTER LRC TEST 3

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F34	0	0	0	0	0	0
□	B1W0F34	0	0	0	0	0	45

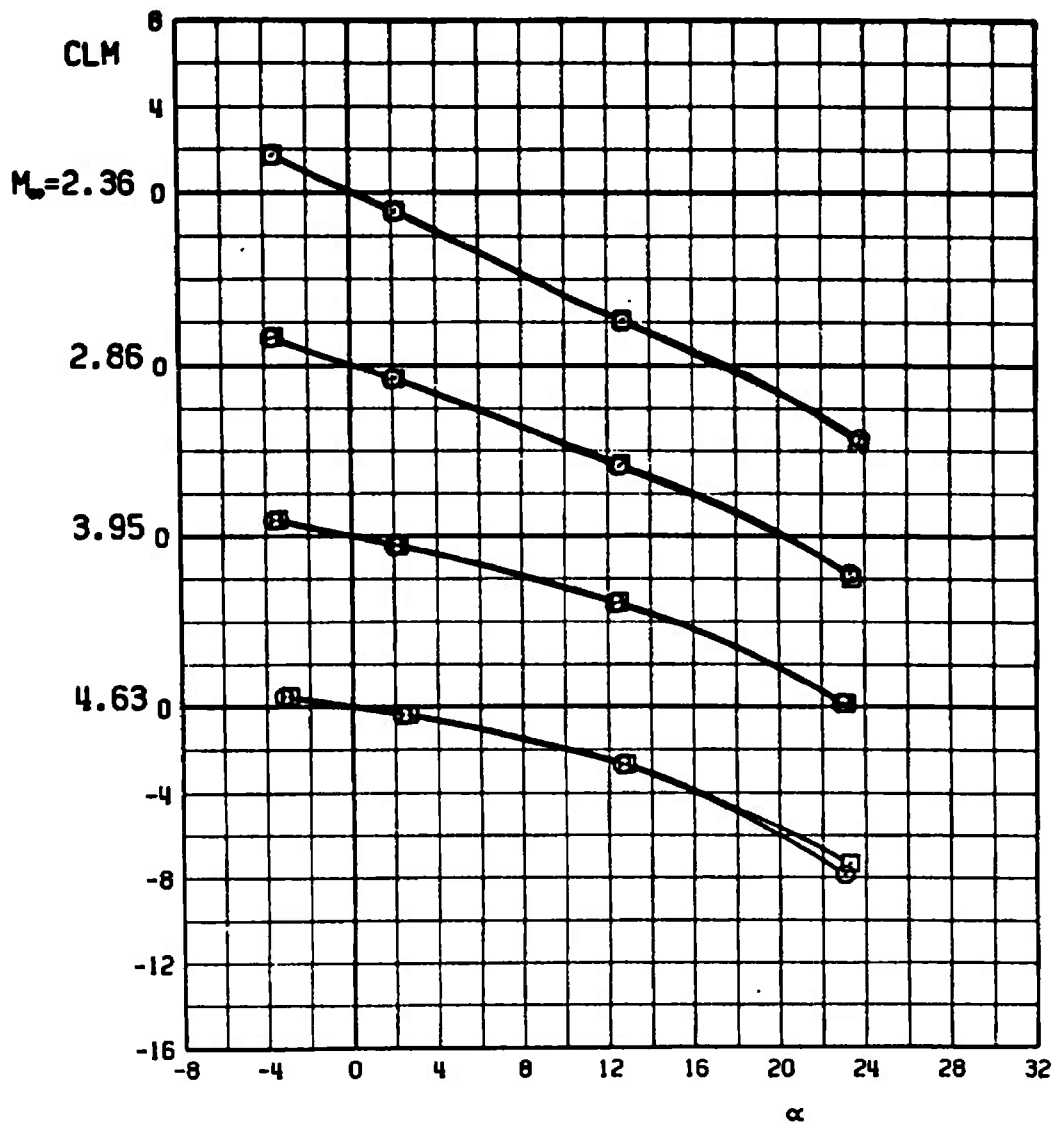


a. CN versus α

Figure 26. Test No. 3, comparison of aerodynamic coefficients of configuration B1W0F34 at roll angles of 0 and 45 deg.

TEST CENTER LRC TEST 3

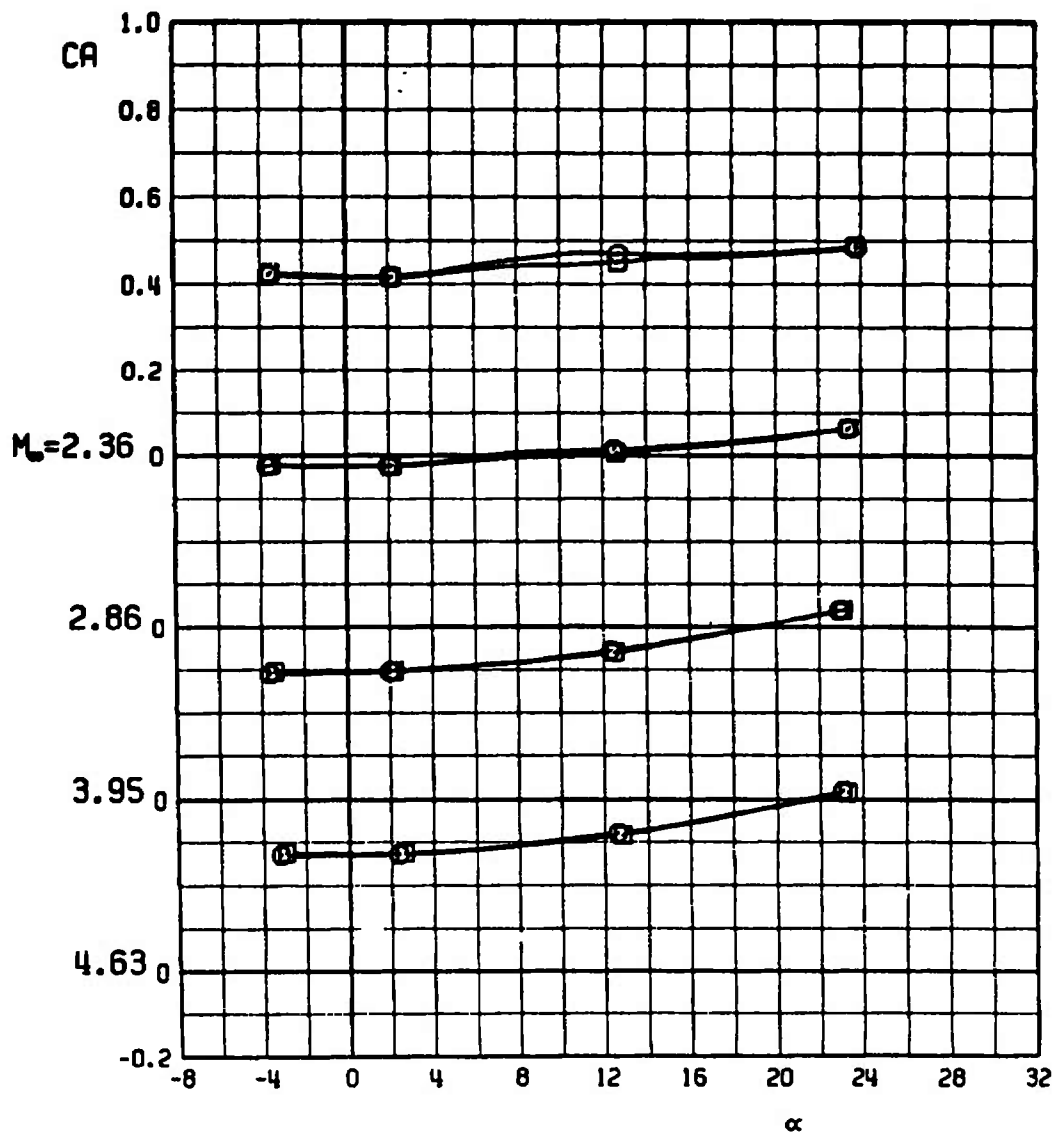
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF34	0	0	0	0	0	0
□	B1WOF34	0	0	0	0	0	45



b. CLM versus α
Figure 26. Continued.

TEST CENTER LAC TEST 3

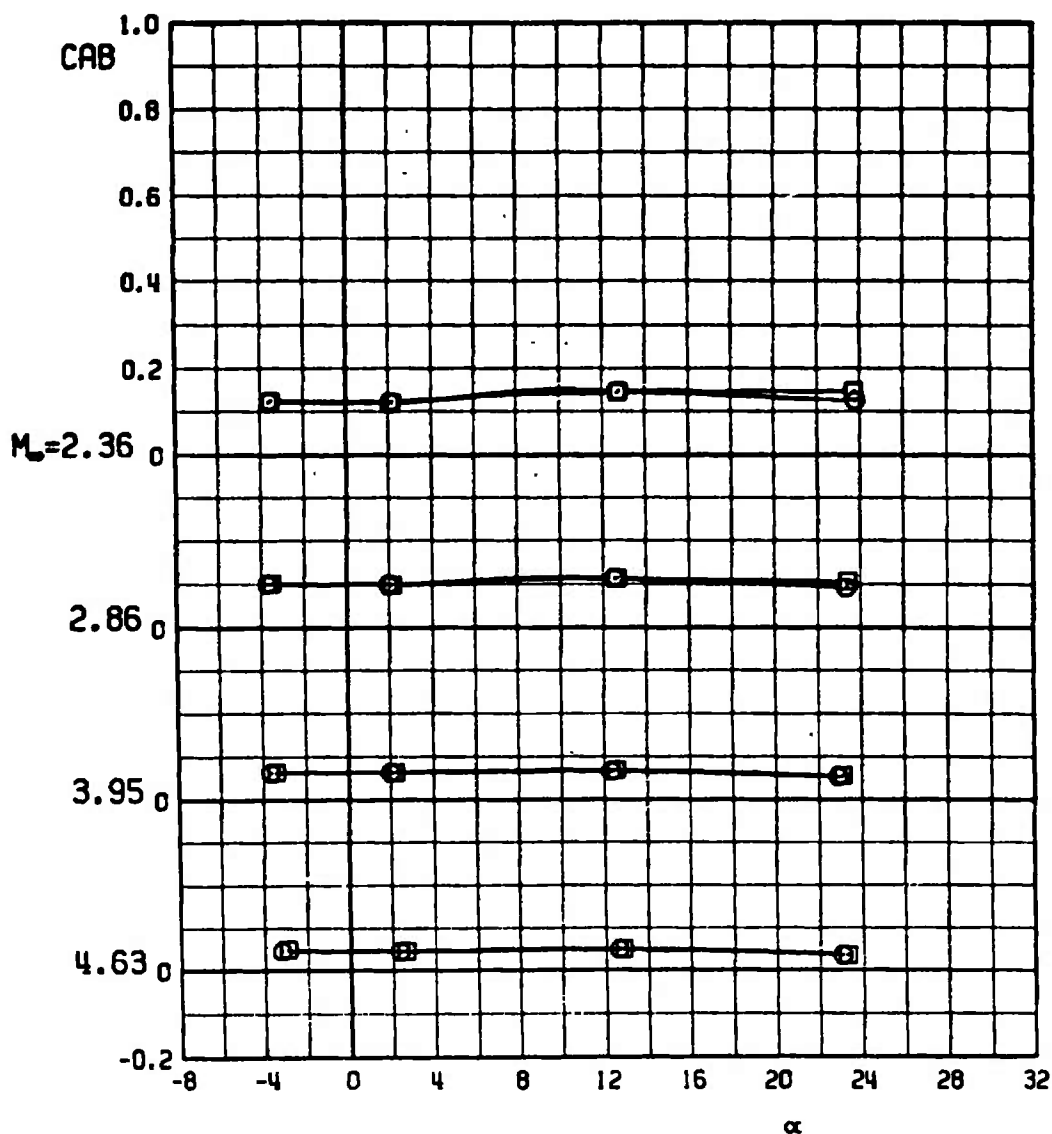
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B1WOF34	0	0	0	0	0	0
⊠	B1WOF34	0	0	0	0	0	45



c. CA versus α
Figure 26. Continued.

TEST CENTER LRC TEST 3

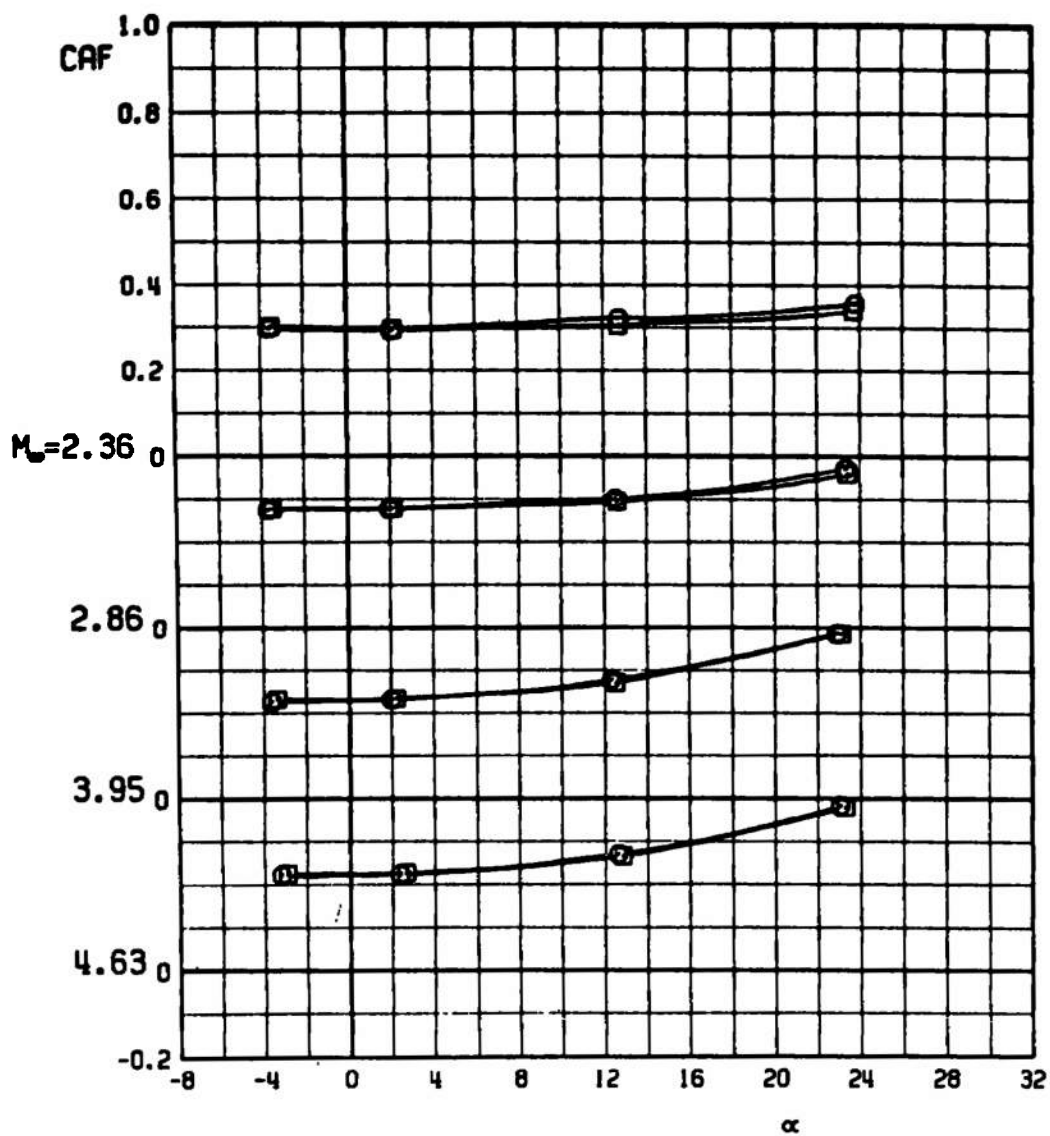
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	0	0	0	45



d. CAB versus α
Figure 26. Continued.

TEST CENTER LAC TEST 3

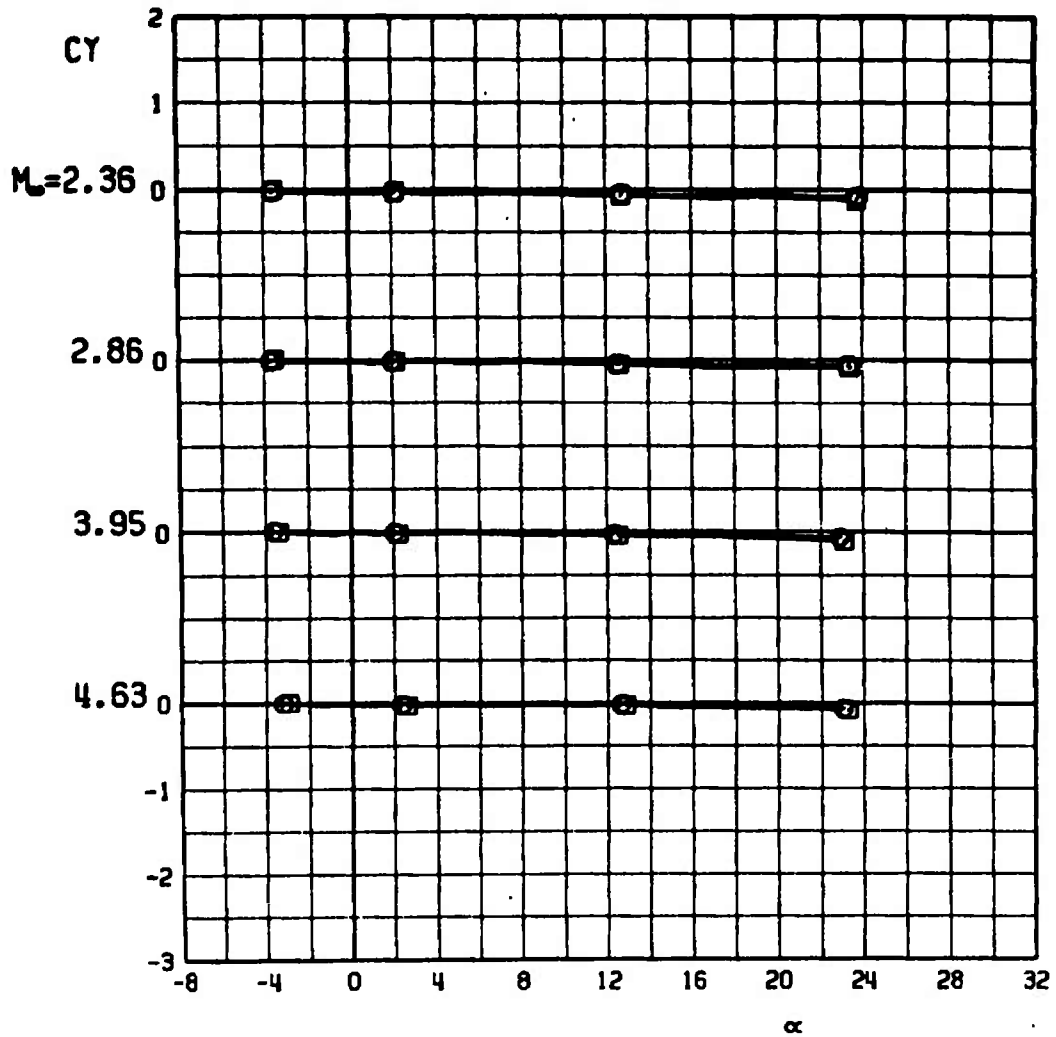
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B1WOF34	0	0	0	0	0	0
⊠	B1WOF34	0	0	0	0	0	45



e. CAF versus α
Figure 26. Continued.

TEST CENTER LRC TEST 3

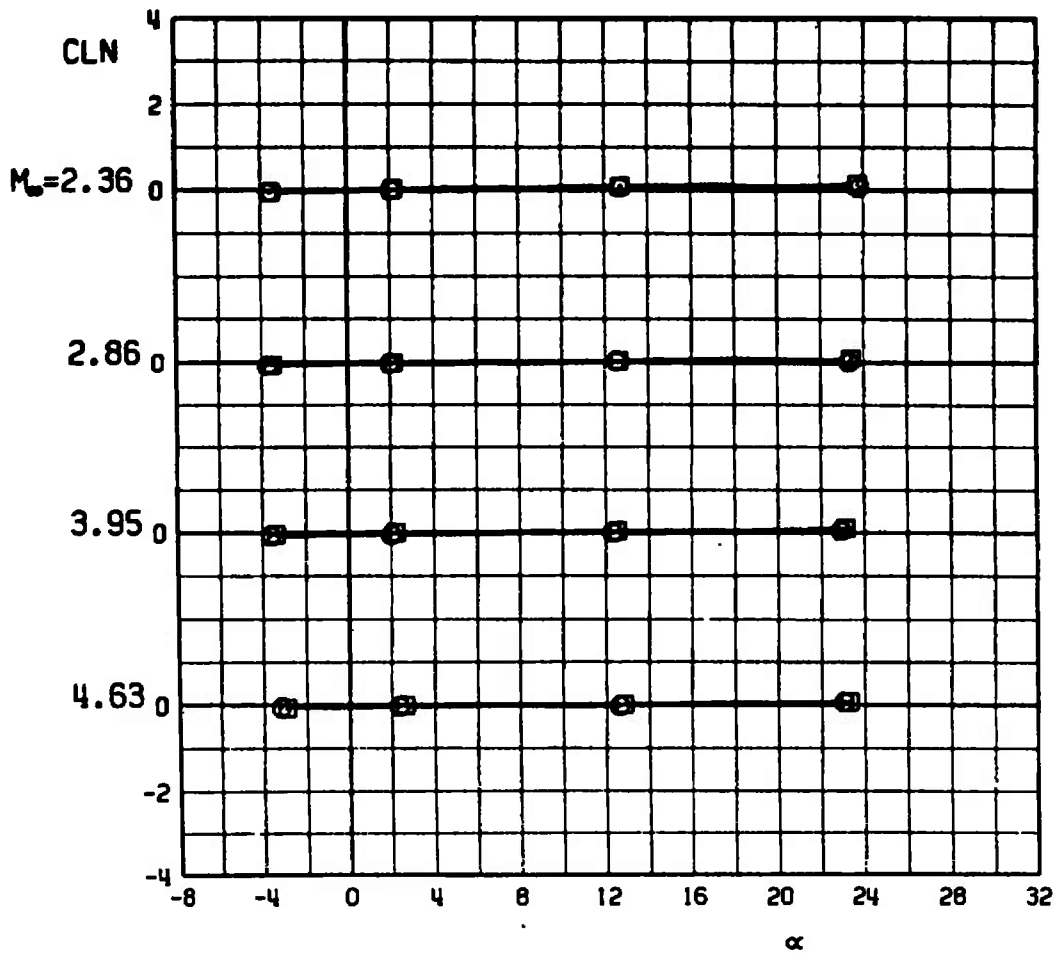
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	81WOF34	0	0	0	0	0	0
⊠	81WOF34	0	0	0	0	0	45



f. C_Y versus α
Figure 26. Continued.

TEST CENTER LRC TEST 3

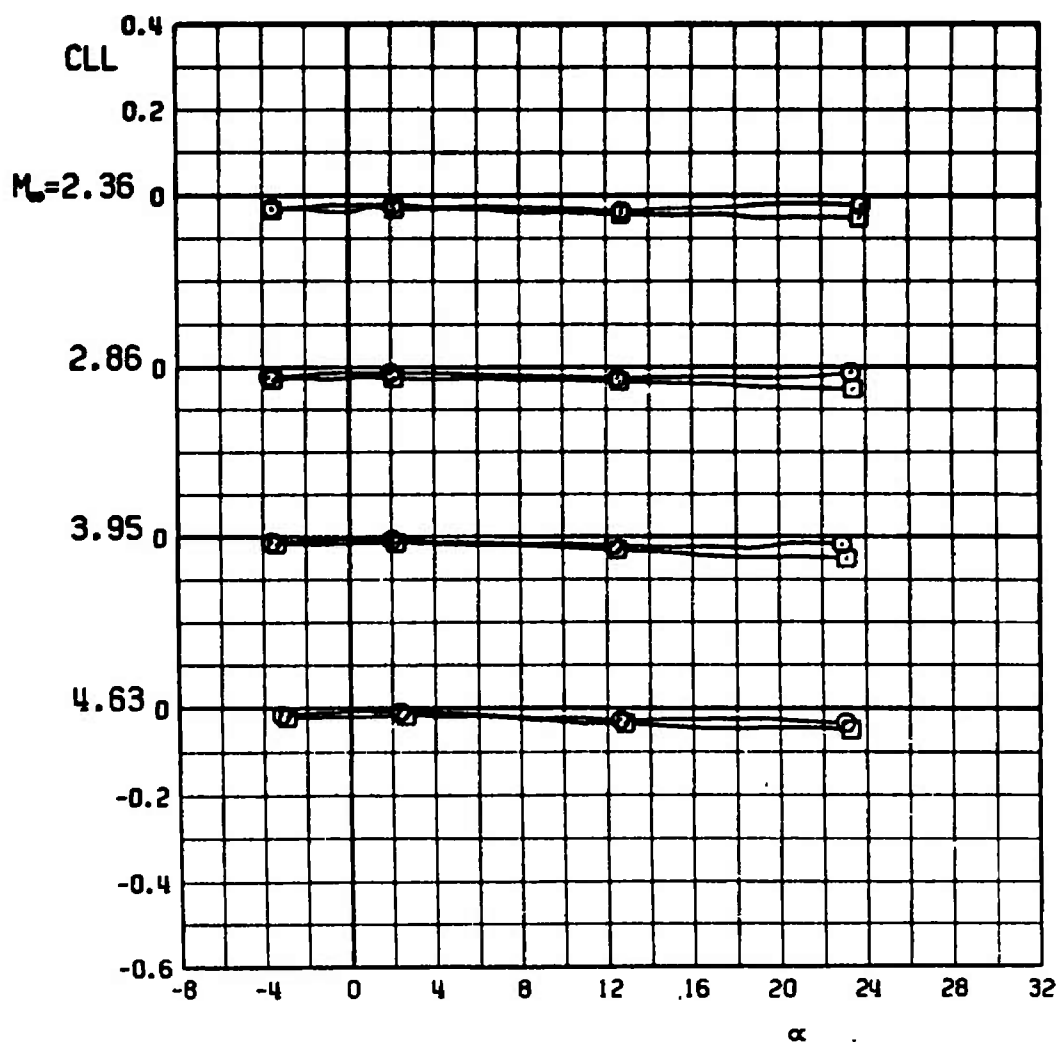
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B1WOF34	0	0	0	0	0	0
⊠	B1WOF34	0	0	0	0	0	45



g. CLN versus α
Figure 26. Continued.

TEST CENTER LAC TEST 3

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF34	0	0	0	0	0	0
□	B1WOF34	0	0	0	0	0	45



h. CLL versus α
Figure 26. Concluded.

TEST CENTER LRC TEST 3

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W1F34	15.42	0	0	0	0	0
□	B1W1F0	15.42	OFF	OFF	OFF	OFF	0
△	B1W0F0	0	OFF	OFF	OFF	OFF	0

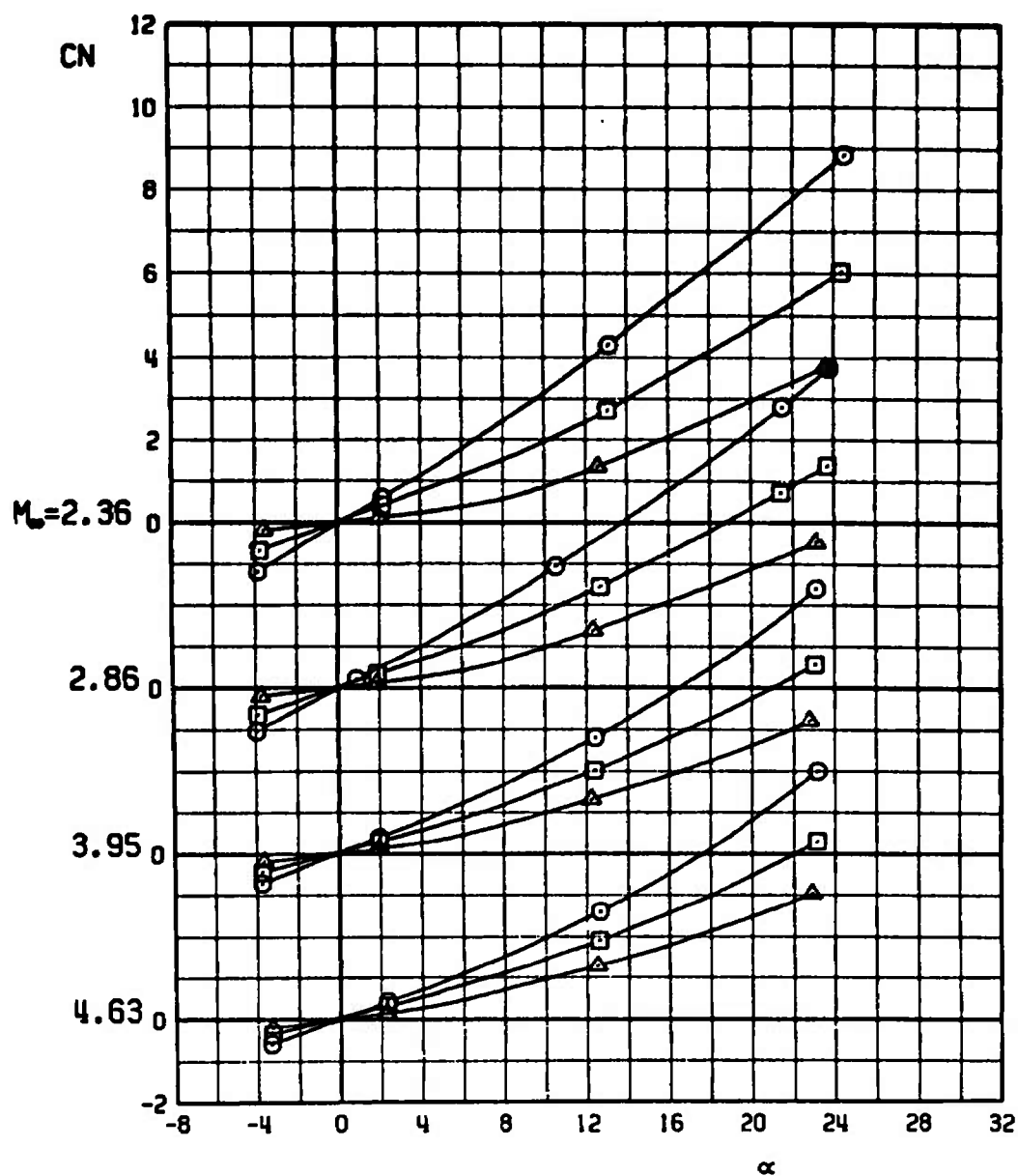
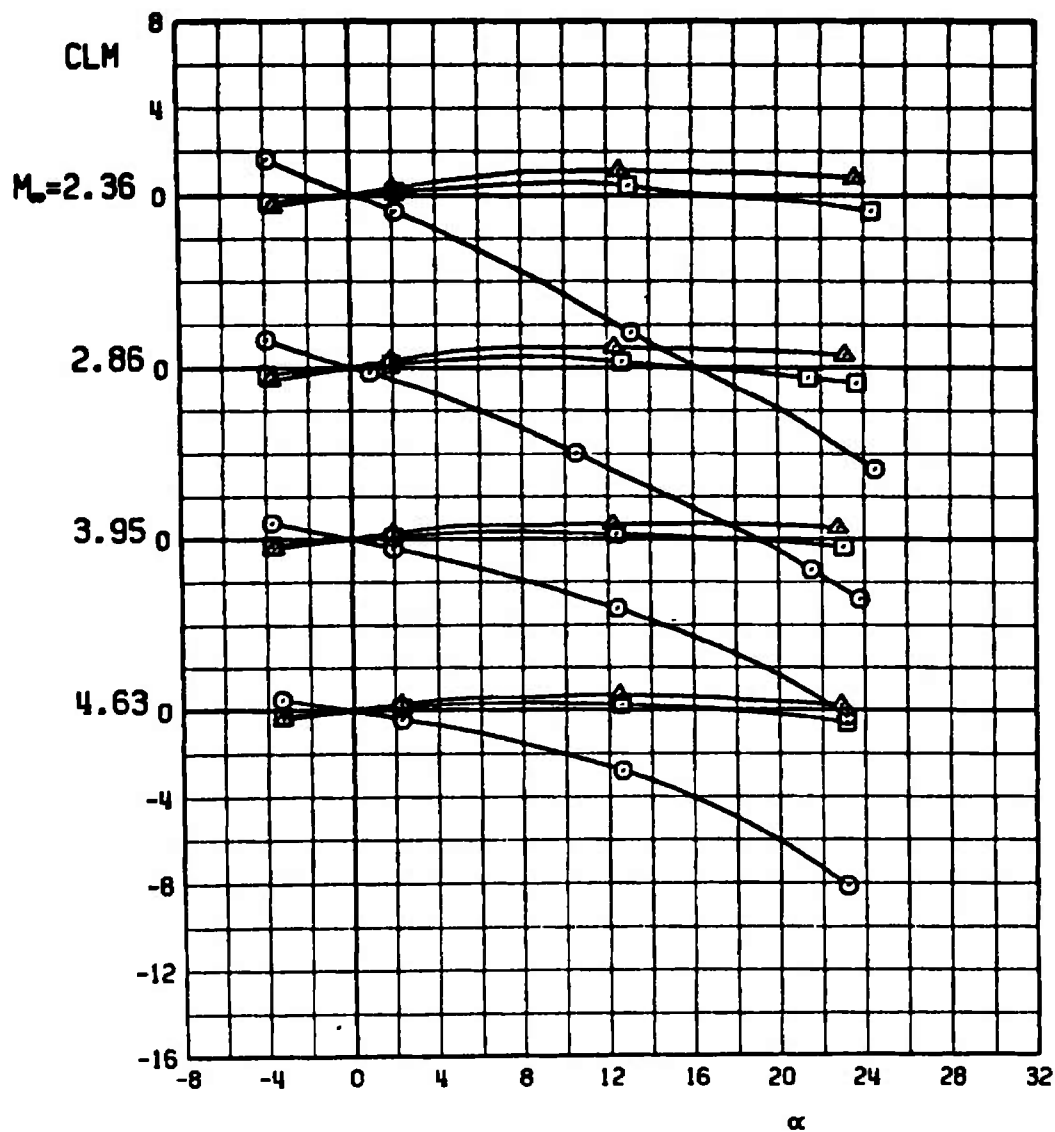
a. C_N versus α

Figure 27. Test No. 3, comparison of aerodynamic coefficients of configurations B1W1F34, B1W1F0, and B1W0F0.

TEST CENTER LRC TEST 3

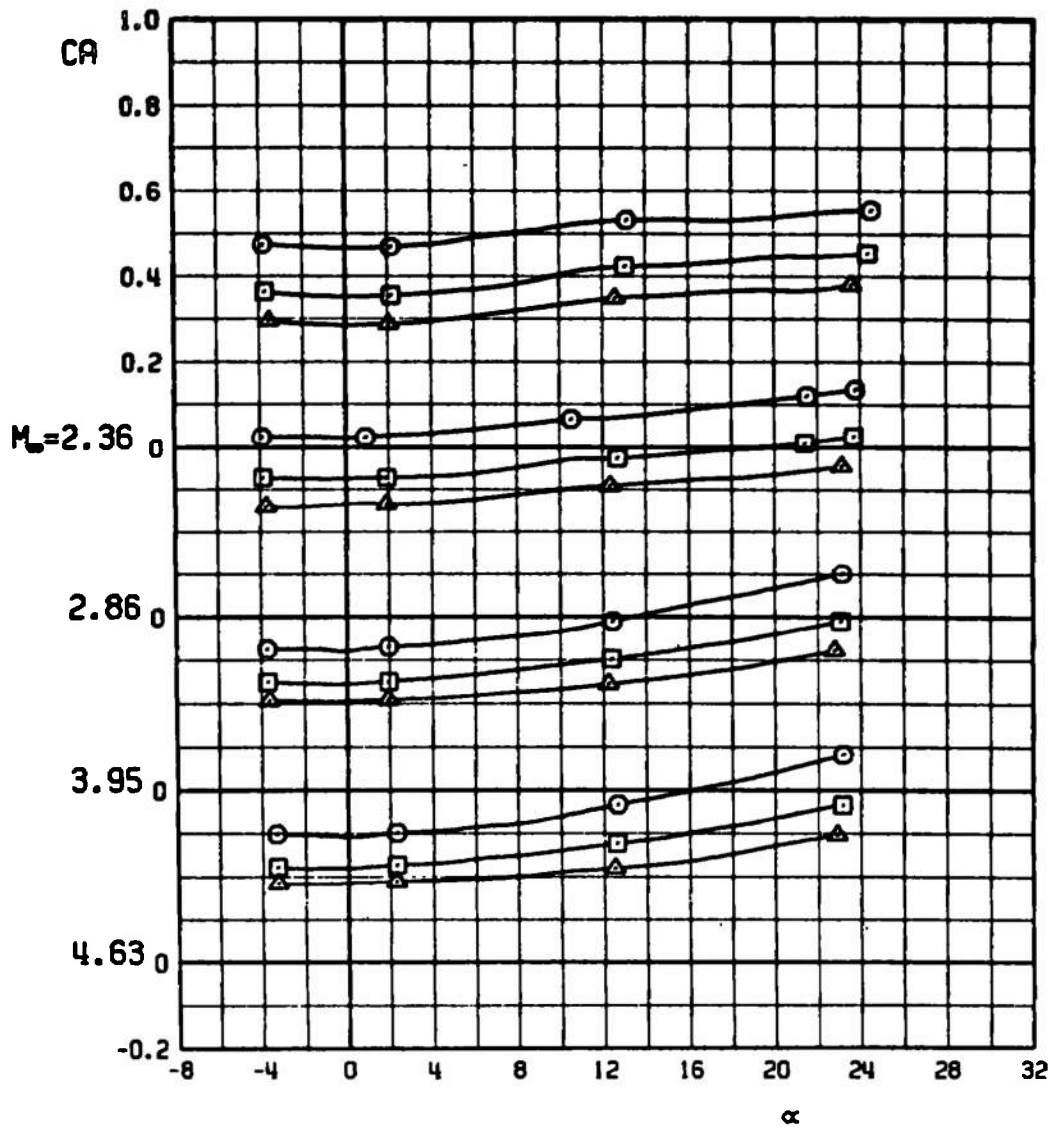
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W1F34	15.42	0	0	0	0	0
□	B1W1F0	15.42	OFF	OFF	OFF	OFF	0
△	B1W0F0	0	OFF	OFF	OFF	OFF	0



b. CLM versus α
Figure 27. Continued.

TEST CENTER LAC TEST 3

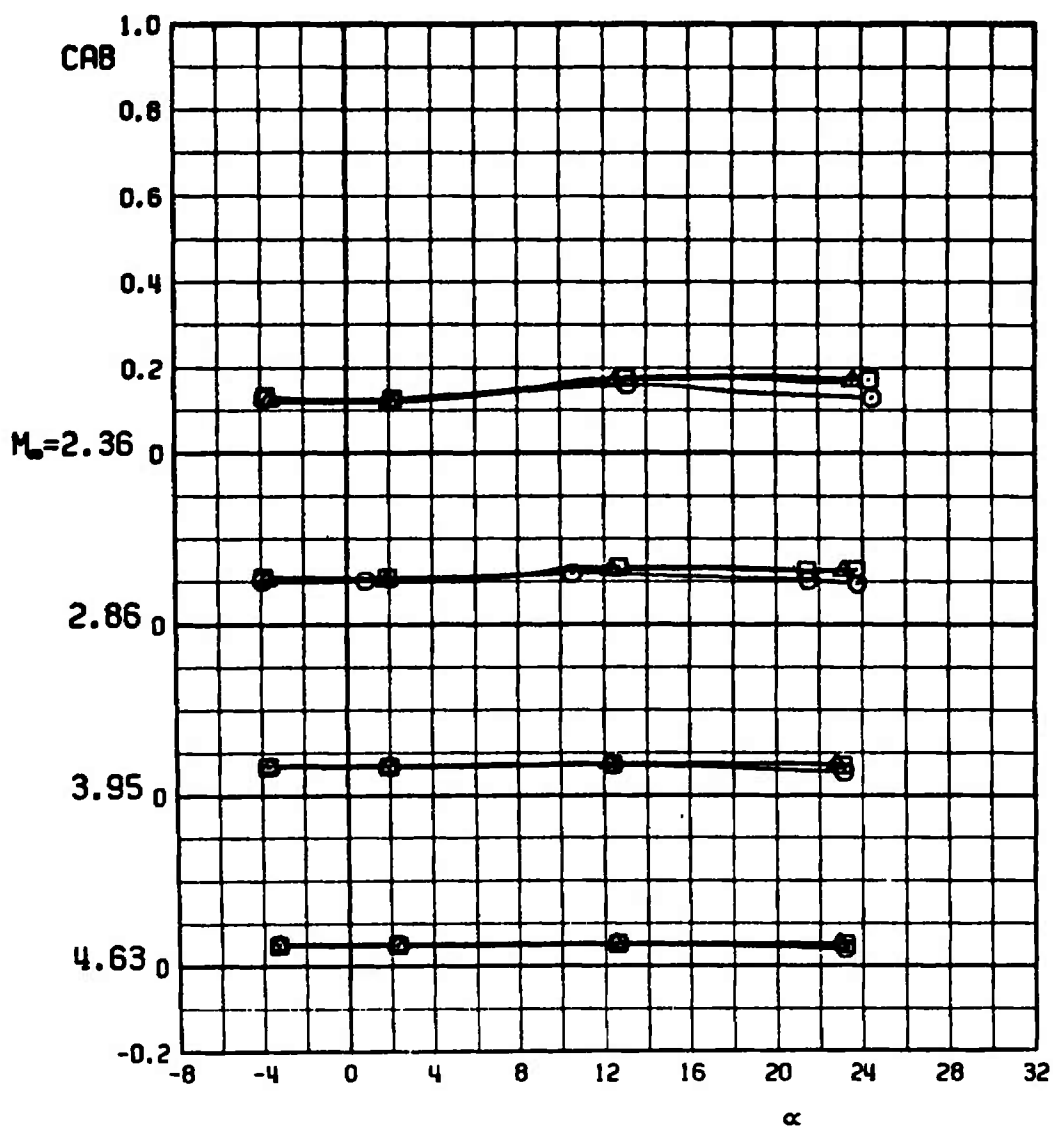
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W1F34	15.42	0	0	0	0	0
□	B1W1F0	15.42	OFF	OFF	OFF	OFF	0
△	B1W0F0	0	OFF	OFF	OFF	OFF	0



c. CA versus α
Figure 27. Continued.

TEST CENTER LRC TEST 3

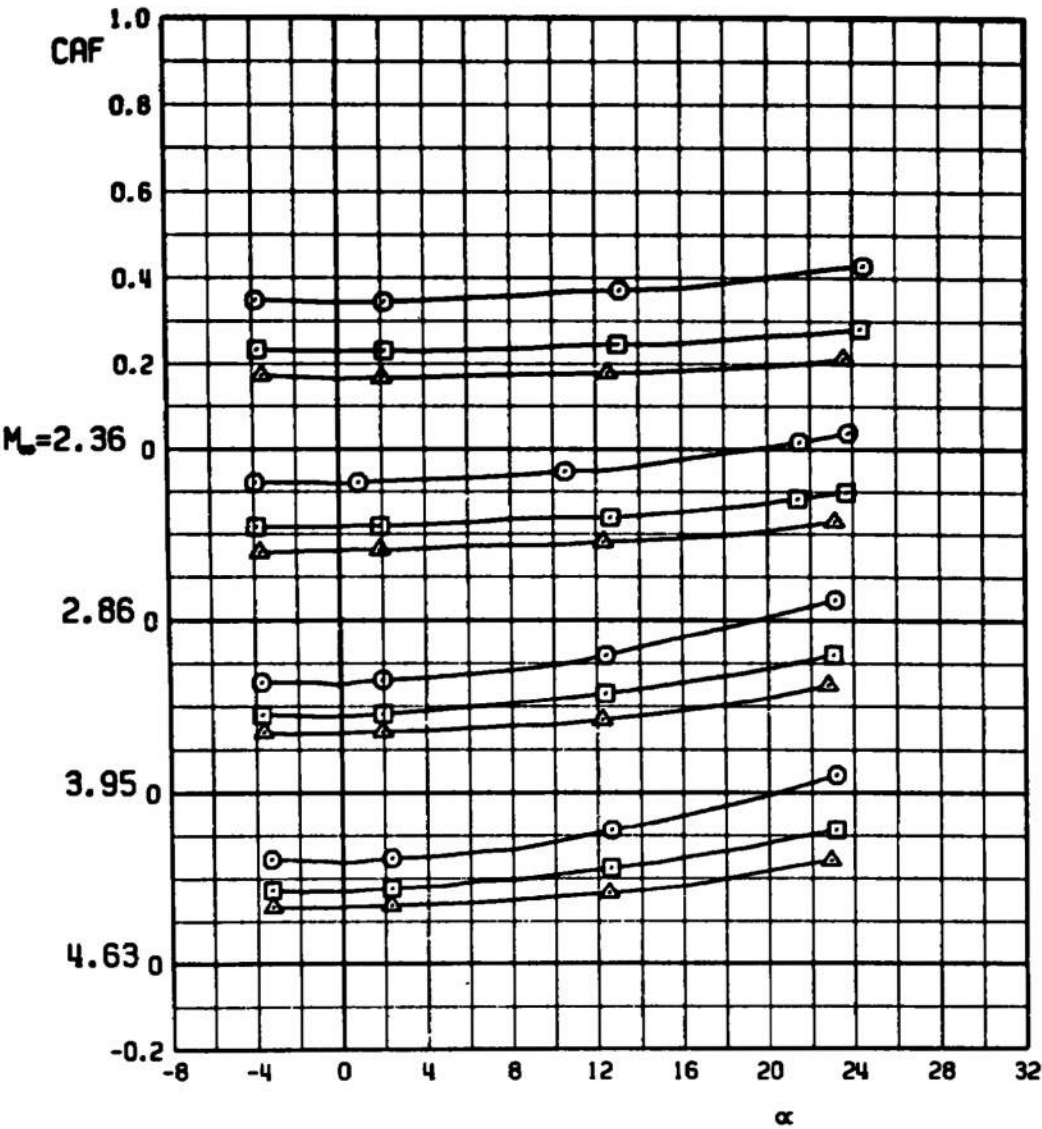
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81W1F34	15.42	0	0	0	0	0
□	81W1F0	15.42	OFF	OFF	OFF	OFF	0
△	81W0F0	0	OFF	OFF	OFF	OFF	0



d. CAB versus α
Figure 27. Continued.

TEST CENTER LRC TEST 3

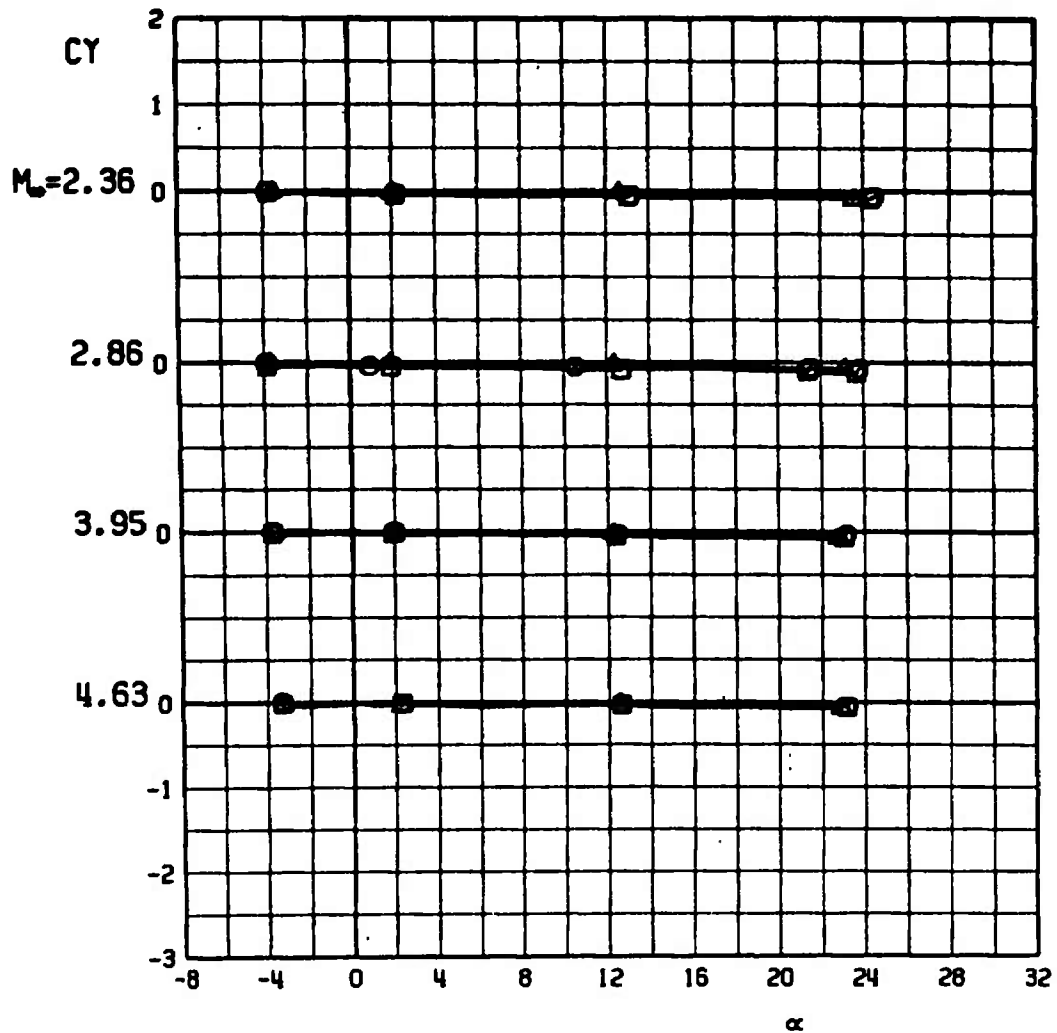
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWIF34	15.42	0	0	0	0	0
□	BIWIFO	15.42	OFF	OFF	OFF	OFF	0
△	BIWOFO	0	OFF	OFF	OFF	OFF	0



e. CAF versus α
Figure 27. Continued.

TEST CENTER LAC TEST 3

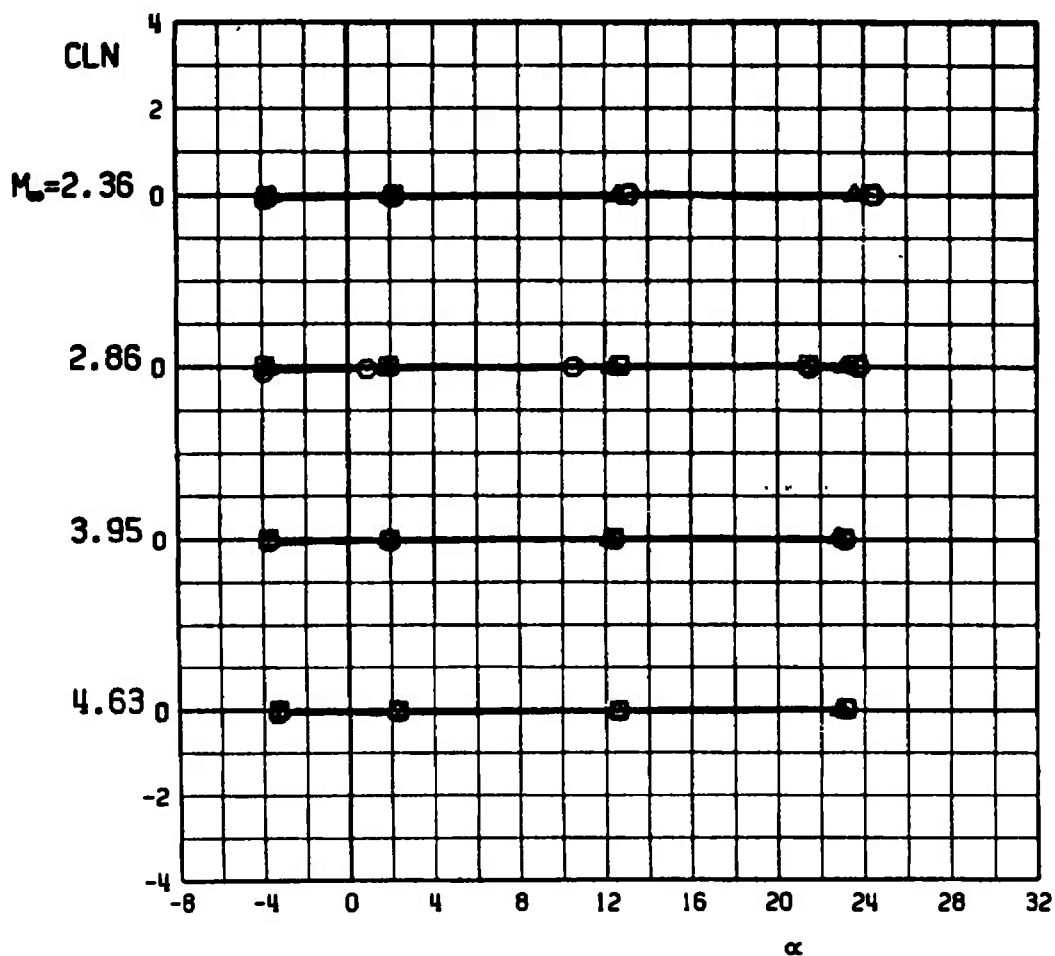
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B1W1F34	15.42	0	0	0	0	0
□	B1W1F0	15.42	OFF	OFF	OFF	OFF	0
△	B1W0F0	0	OFF	OFF	OFF	OFF	0



f. CY versus α
Figure 27. Continued.

TEST CENTER LAC TEST 3

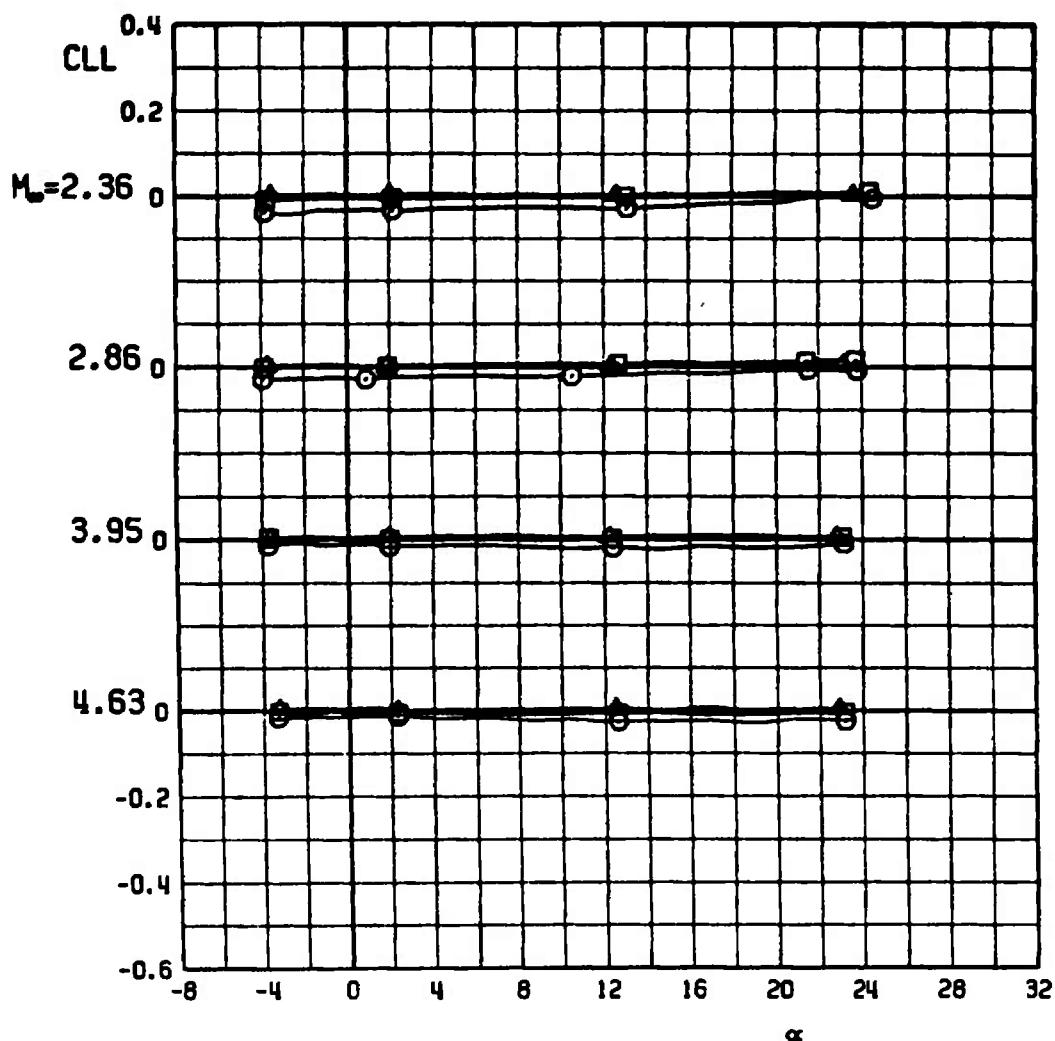
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B1W1F34	15.42	0	0	0	0	0
□	B1W1FO	15.42	OFF	OFF	OFF	OFF	0
△	B1W0FO	0	OFF	OFF	OFF	OFF	0



g. CLN versus α
Figure 27. Continued.

TEST CENTER LAC TEST 3

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B1W1F34	15.42	0	0	0	0	0
□	B1W1F0	15.42	OFF	OFF	OFF	OFF	0
△	B1W0F0	0	OFF	OFF	OFF	OFF	0



h. CLL versus α
Figure 27. Concluded.

TEST CENTER LAC TEST 4

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W0F31	0	20	0	20	0	-90
□	B2W0F32	0	20	0	20	0	-90
△	B2W0F36	0	20	0	20	0	-90

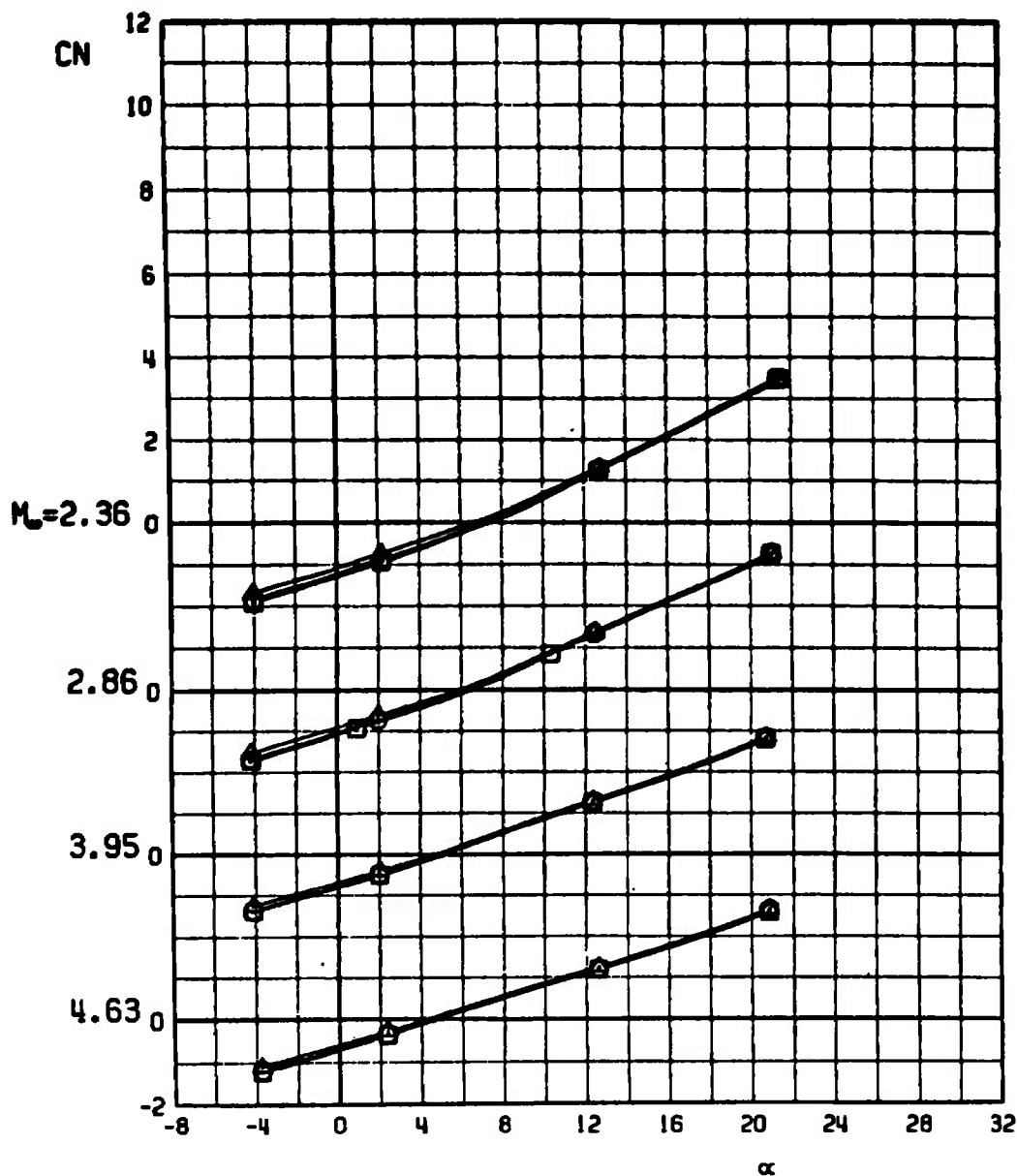
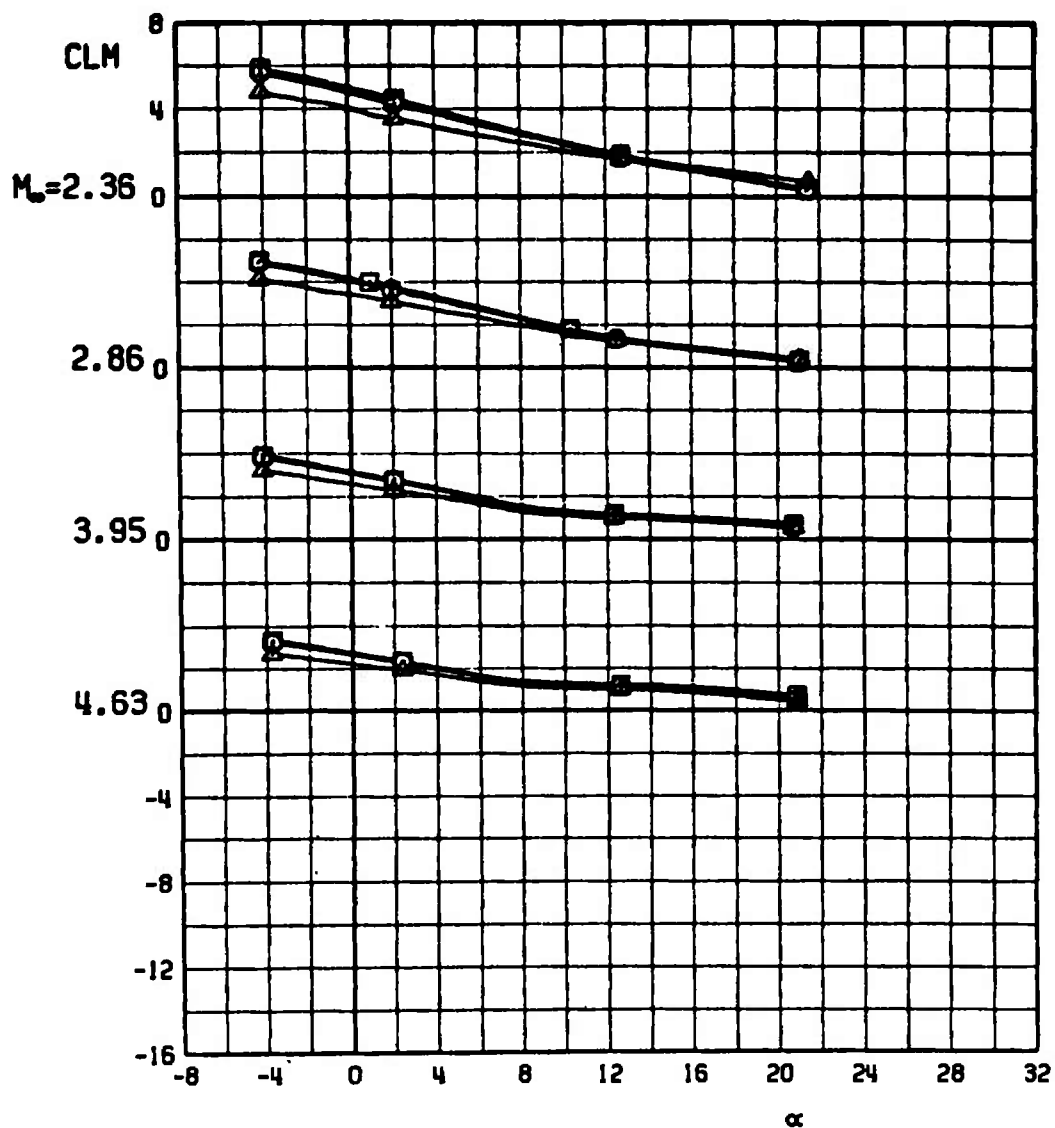
a. C_N versus α

Figure 28. Test No. 4, comparison of aerodynamic coefficients of configurations B2W0F31, B2W0F32, and B2W0F36 at a model roll angle of -90 deg and deflections for fins No. 1 and 3 of 20 deg and fins No. 2 and 4 of 0 deg.

TEST CENTER LAC TEST 4

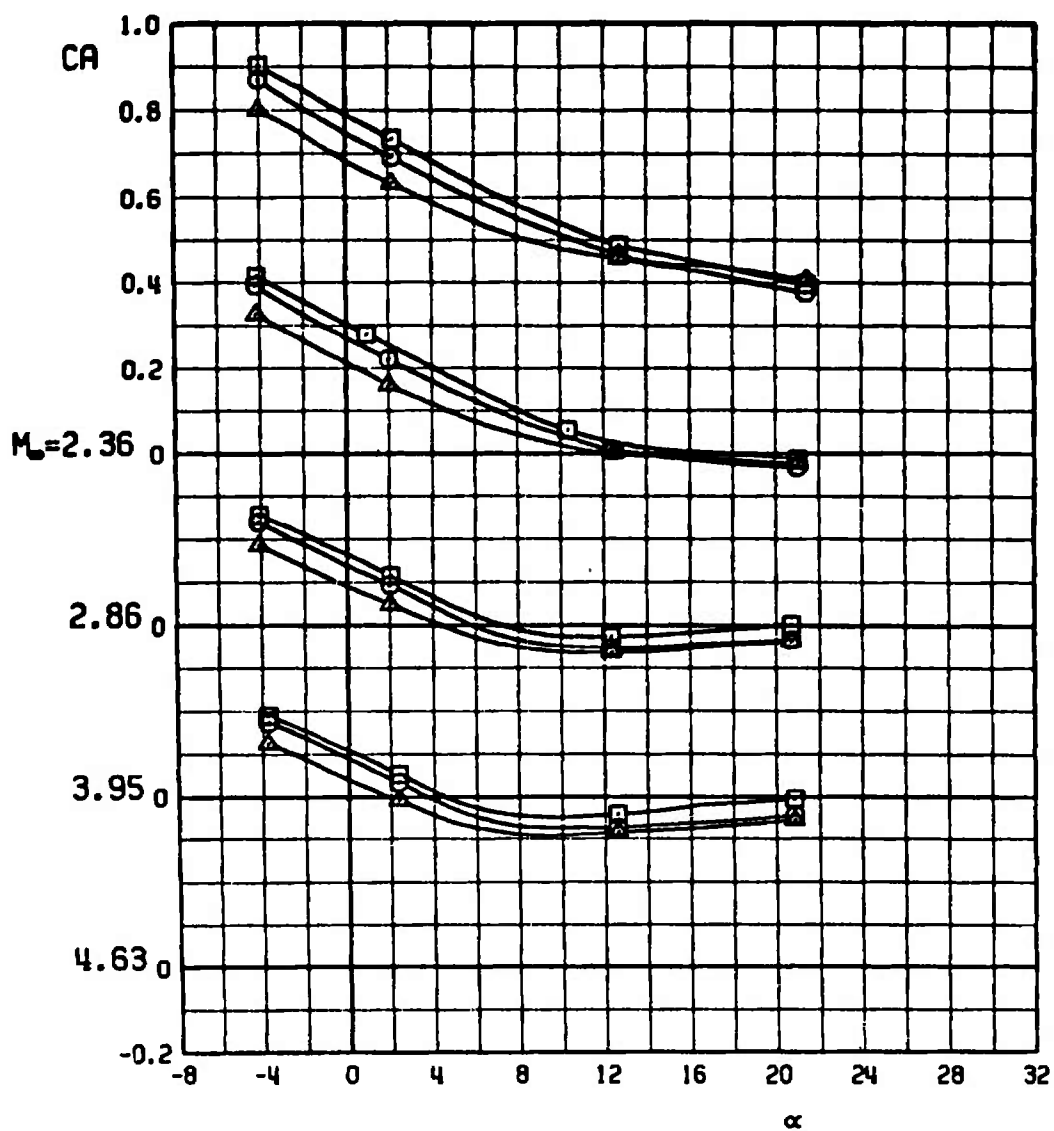
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF31	0	20	0	20	0	-90
□	B2WOF32	0	20	0	20	0	-90
△	B2WOF36	0	20	0	20	0	-90



b. CLM versus α
Figure 28. Continued.

TEST CENTER LAC TEST 4

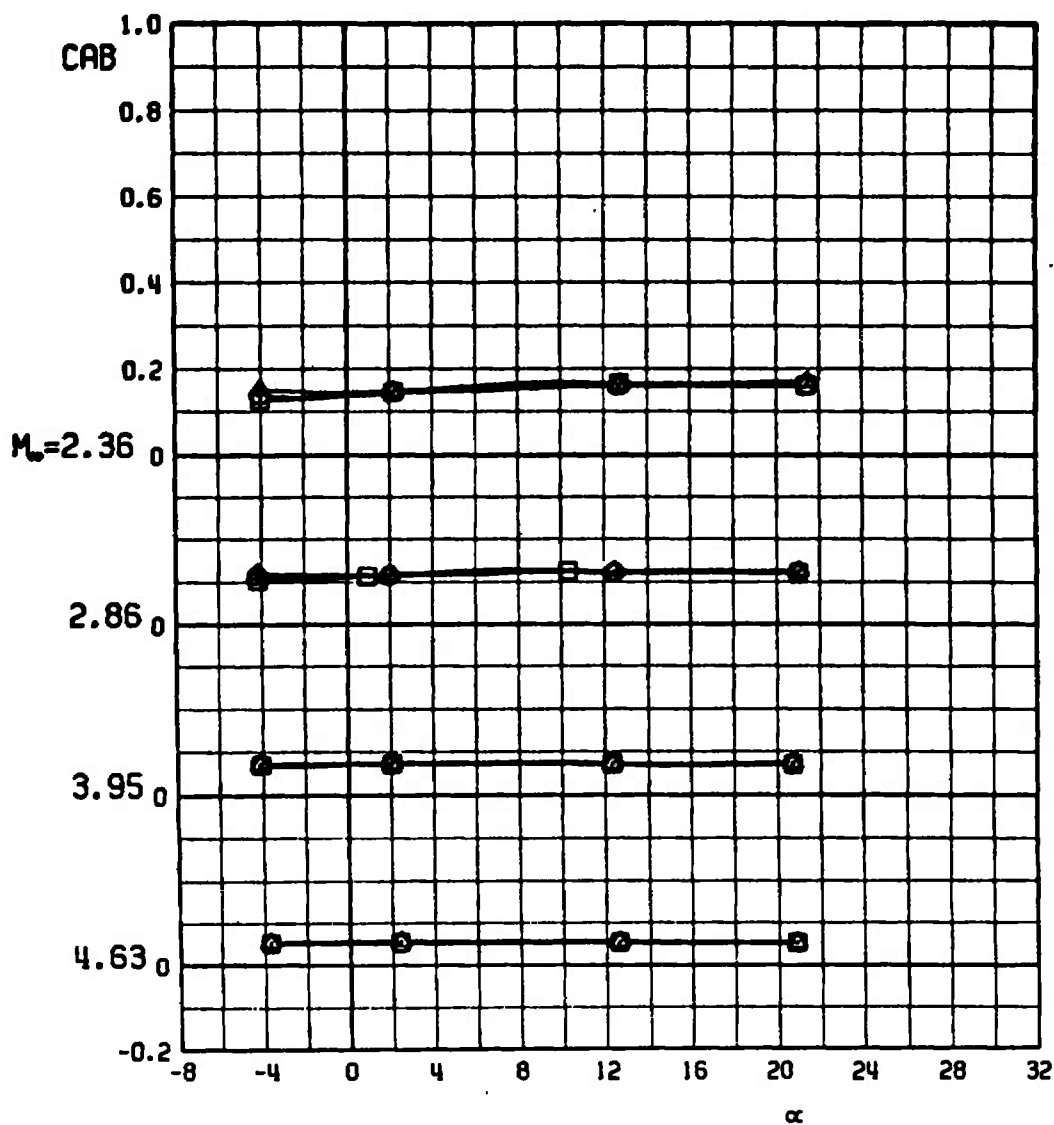
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF31	0	20	0	20	0	-90
□	B2WOF32	0	20	0	20	0	-90
△	B2WOF36	0	20	0	20	0	-90



c. CA versus α
Figure 28. Continued.

TEST CENTER LAC TEST 4

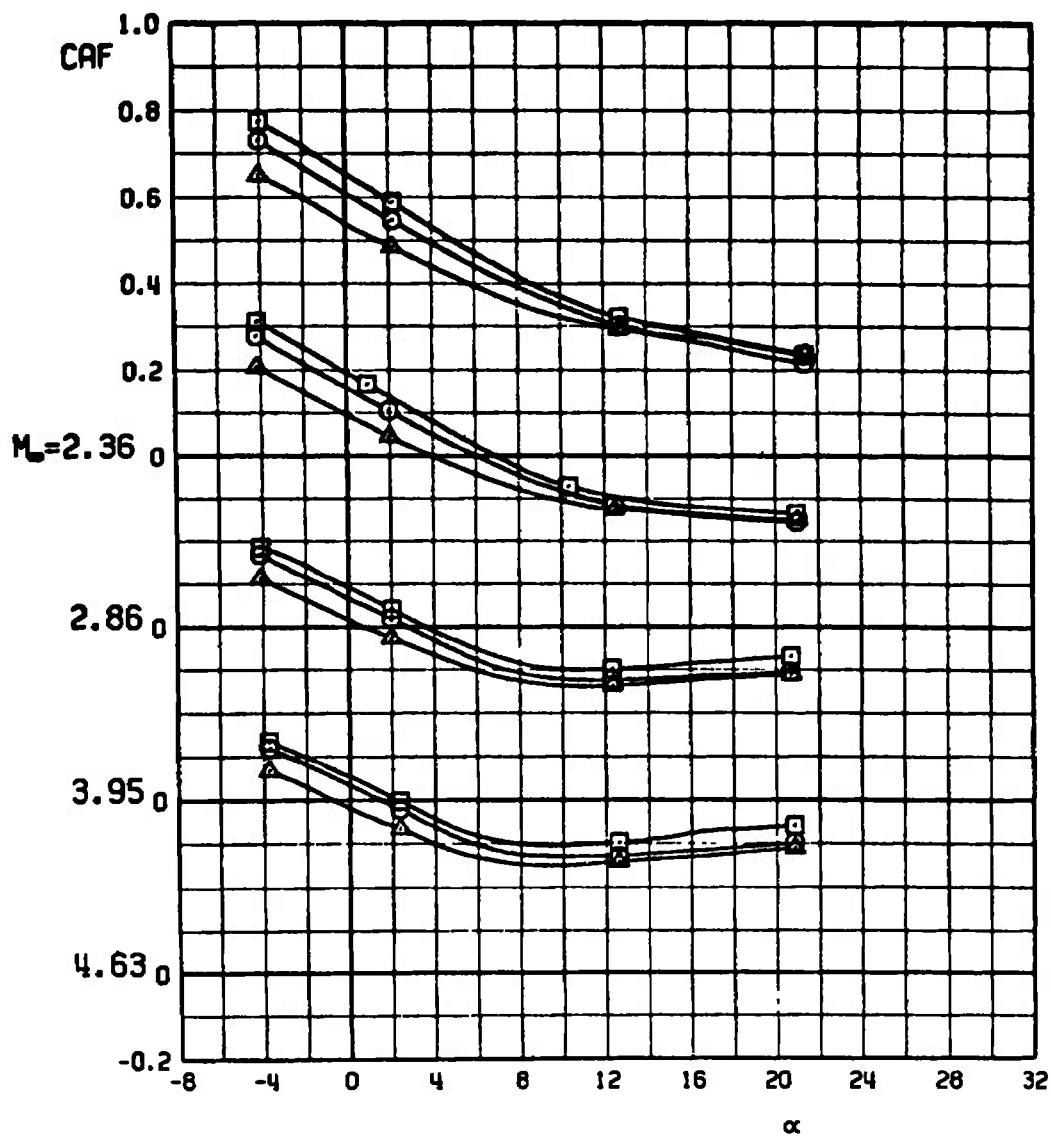
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF31	0	20	0	20	0	-90
□	B2WOF32	0	20	0	20	0	-90
△	B2WOF36	0	20	0	20	0	-90



d. CAB versus α
Figure 28. Continued.

TEST CENTER LAC TEST 4

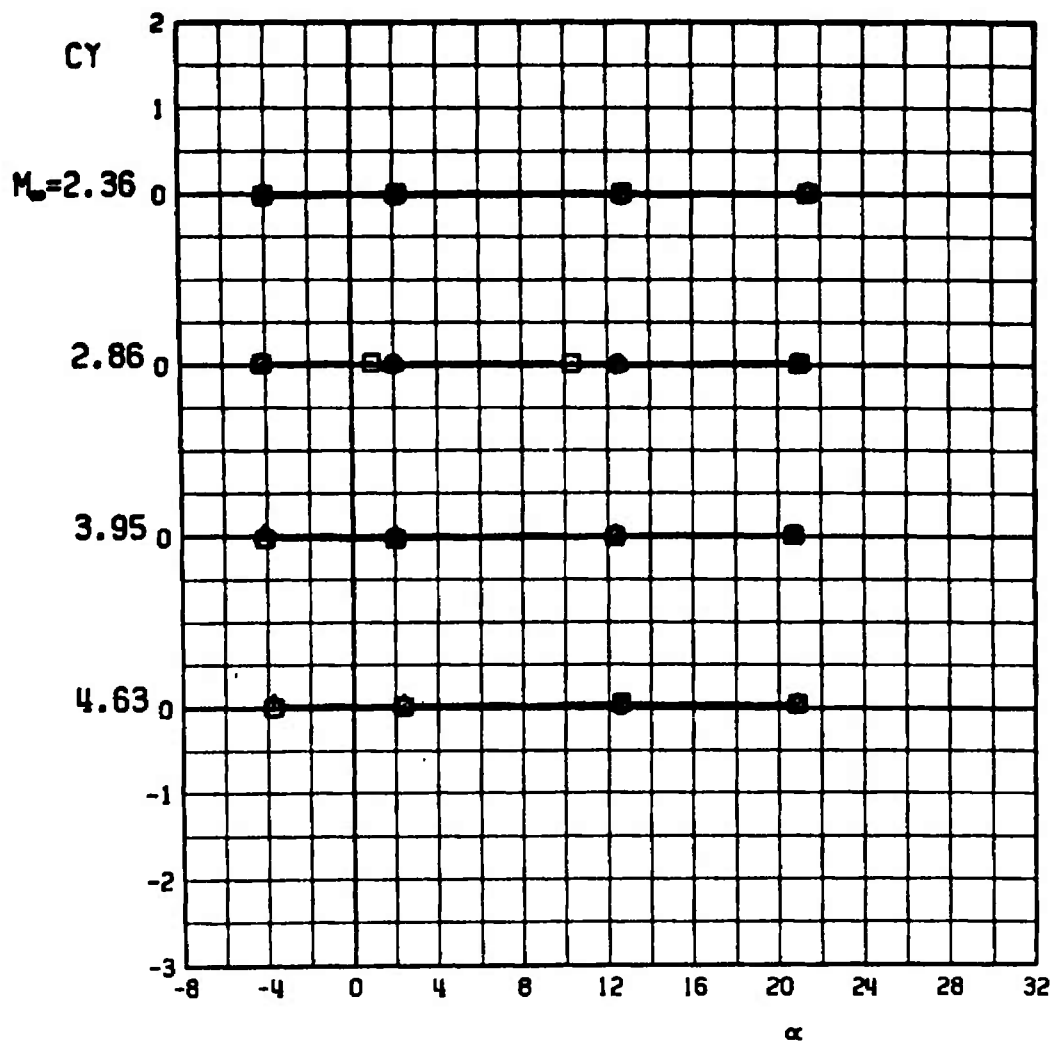
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF31	0	20	0	20	0	-90
□	B2WOF32	0	20	0	20	0	-90
△	B2WOF36	0	20	0	20	0	-90



e. CAF versus α
Figure 28. Continued.

TEST CENTER LRC TEST 4

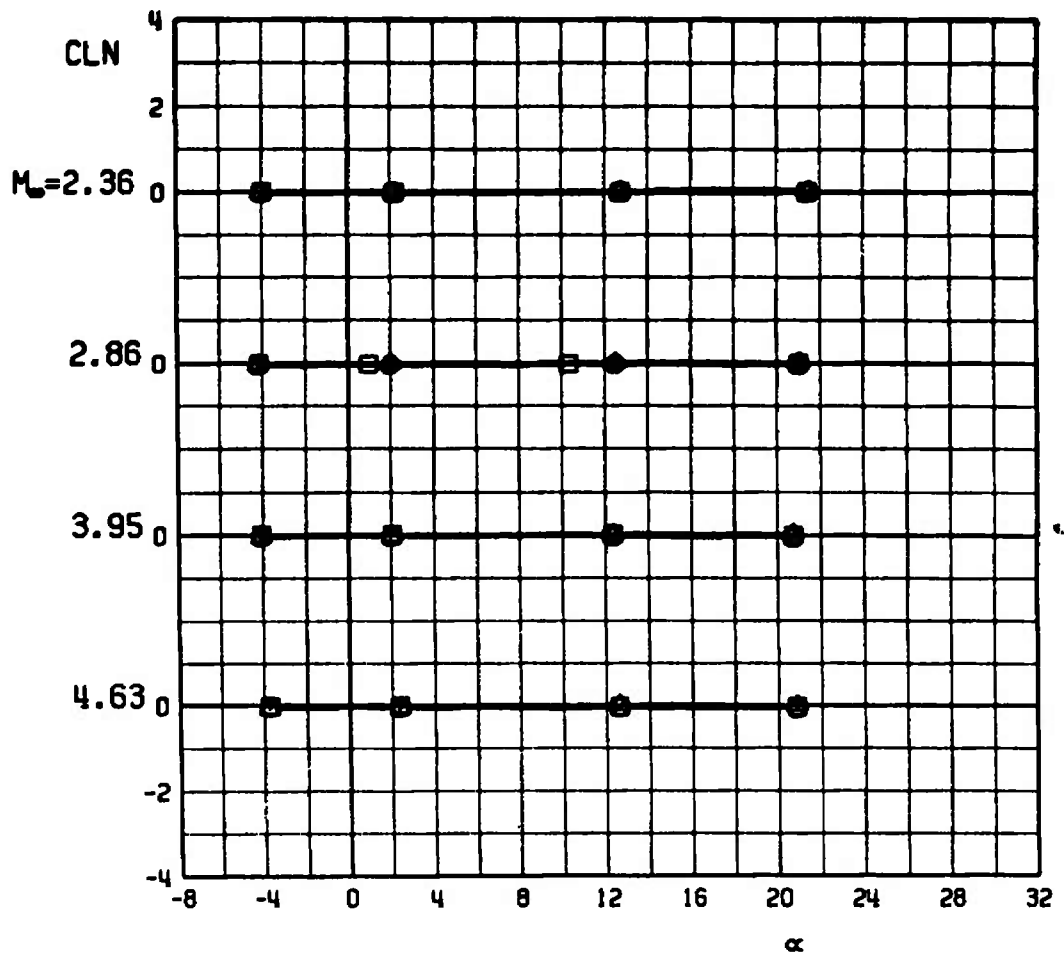
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B2WOF31	0	20	0	20	0	-90
□	B2WOF32	0	20	0	20	0	-90
△	B2WOF36	0	20	0	20	0	-90



f. CY versus α
Figure 28. Continued.

TEST CENTER LAC TEST 4

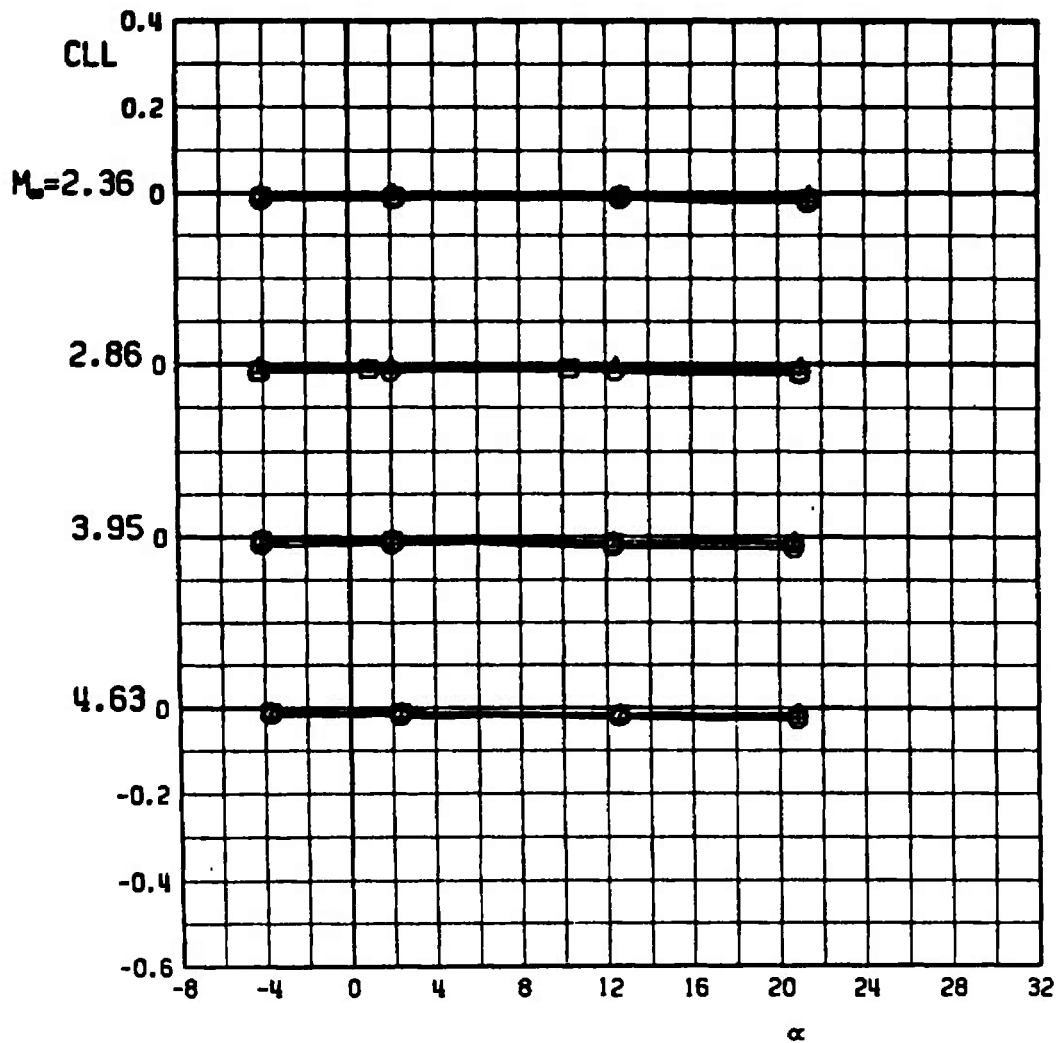
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B2WOF31	0	20	0	20	0	-90
⊠	B2WOF32	0	20	0	20	0	-90
△	B2WOF36	0	20	0	20	0	-90



g. CLN versus α
Figure 28. Continued.

TEST CENTER LAC TEST 4

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B2WOF31	0	20	0	20	0	-90
□	B2WOF32	0	20	0	20	0	-90
△	B2WOF36	0	20	0	20	0	-90



h. CLL versus α
Figure 28. Concluded.

TEST CENTER LAC TEST 4

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B2W0F34	0	0	0	0	0	0
□	B2W0F35	0	0	0	0	0	0
△	B2W0F33	0	0	0	0	0	0

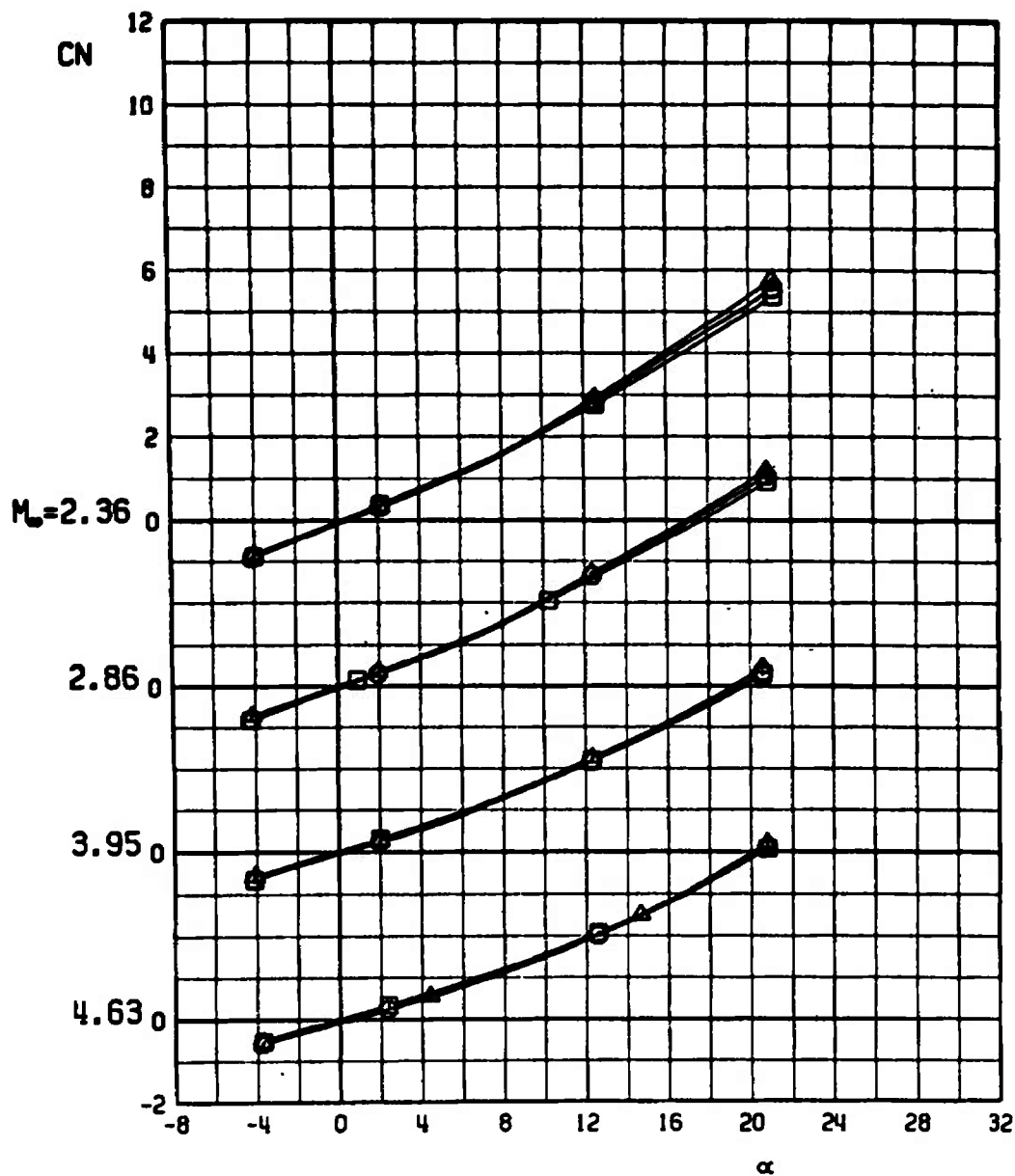
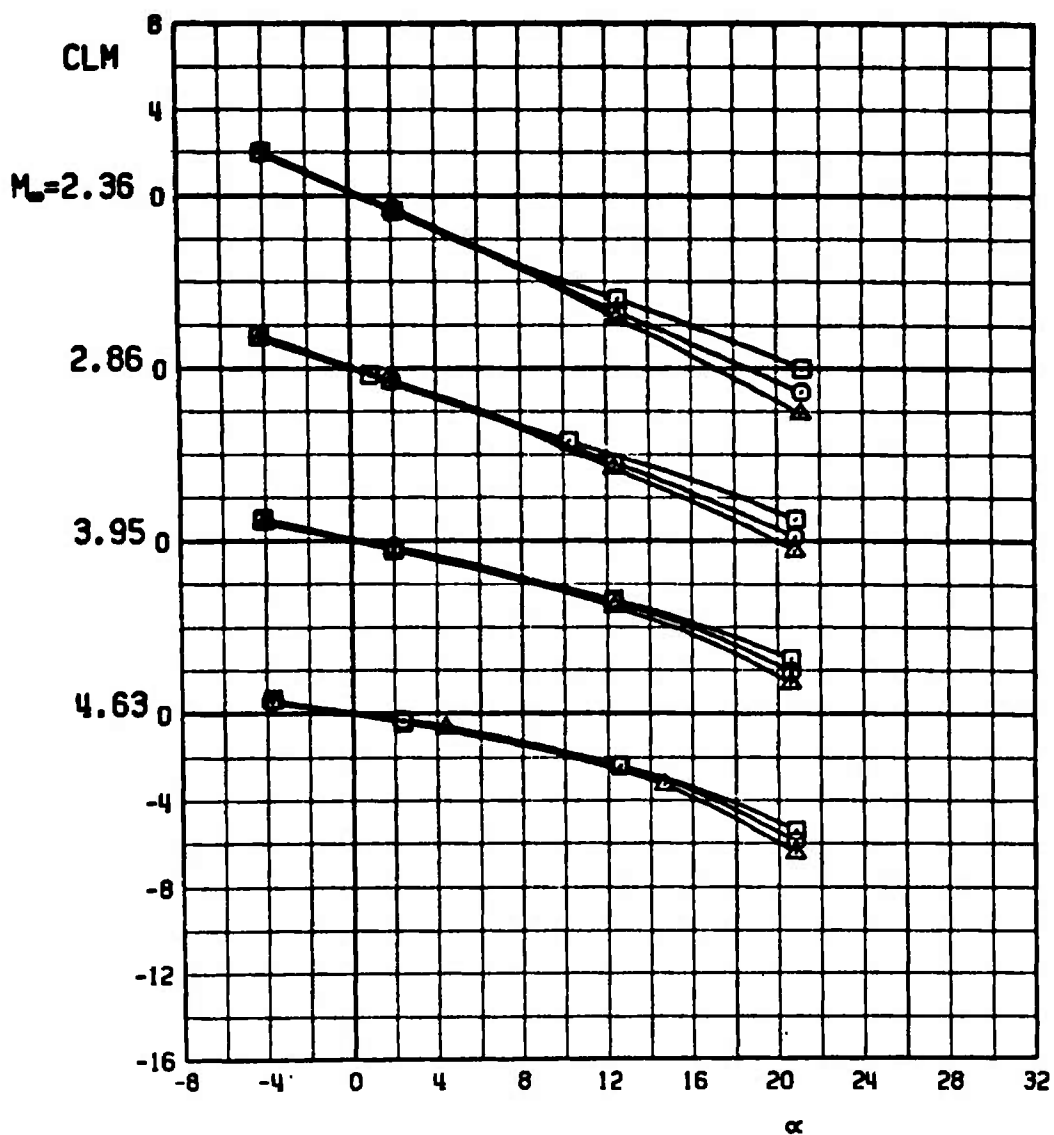
a. CN versus α

Figure 29. Test No. 4, comparison of aerodynamic coefficients of configurations B2W0F34, B2W0F35, and B2W0F33.

TEST CENTER LAC TEST 4

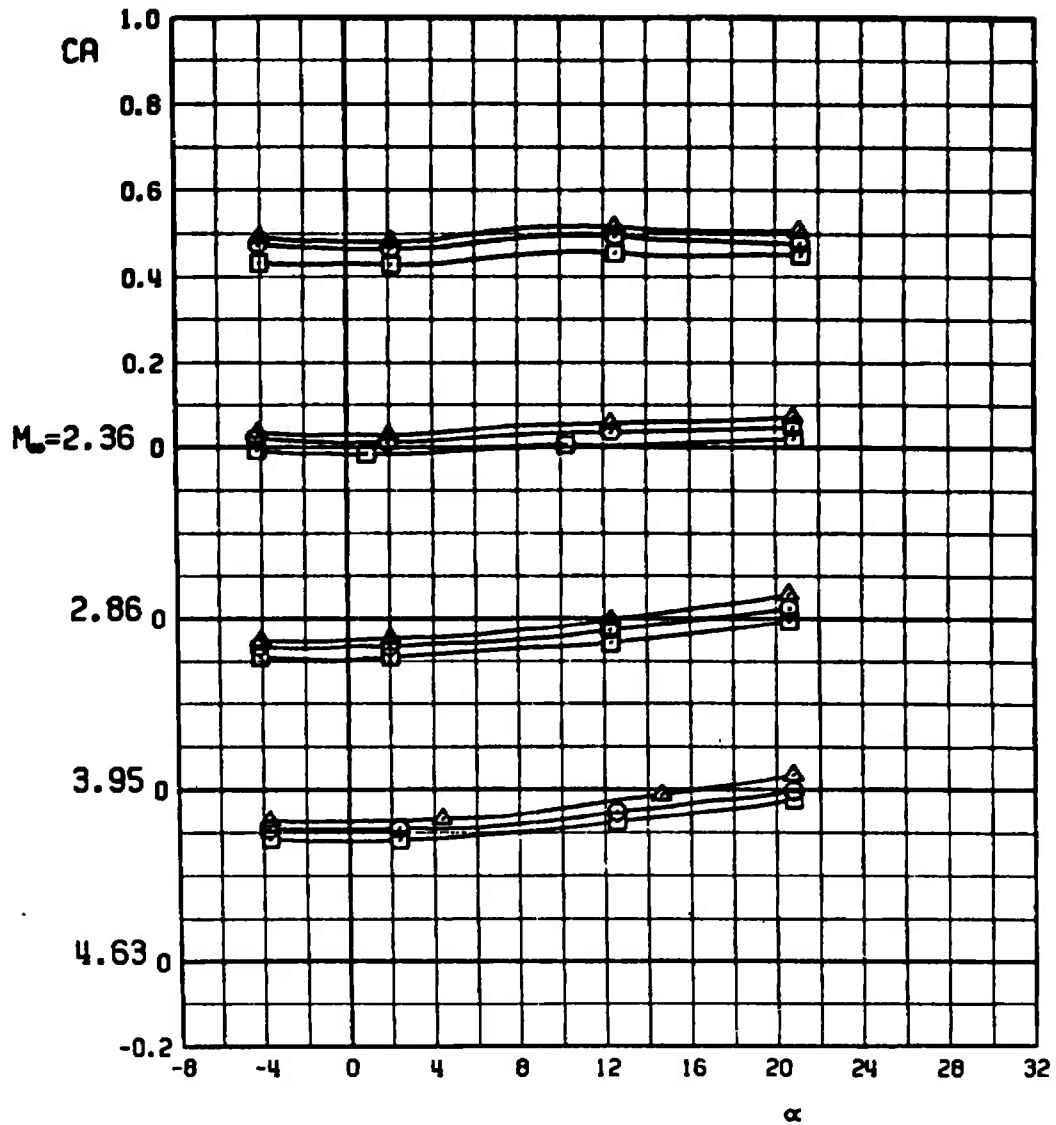
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF34	0	0	0	0	0	0
□	B2WOF35	0	0	0	0	0	0
△	B2WOF33	0	0	0	0	0	0



b. CLM versus α
Figure 29. Continued.

TEST CENTER LAC TEST 4

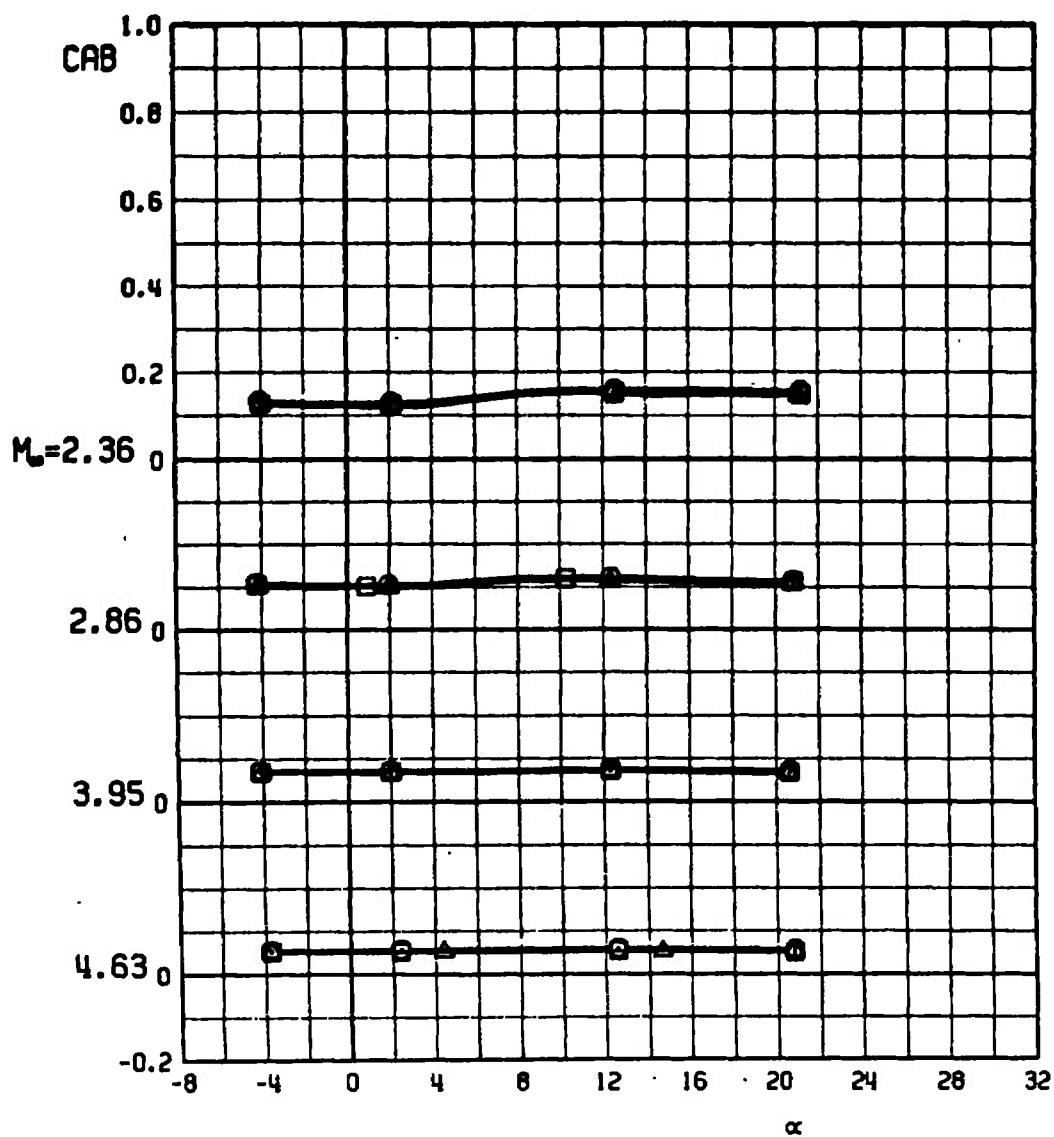
	CONF	L	DEL1	OEL2	DEL3	DEL4	PHI
○	B2WOF34	0	0	0	0	0	0
□	B2WOF35	0	0	0	0	0	0
△	B2WOF33	0	0	0	0	0	0



c. CA versus α
Figure 29. Continued.

TEST CENTER LRC TEST 4

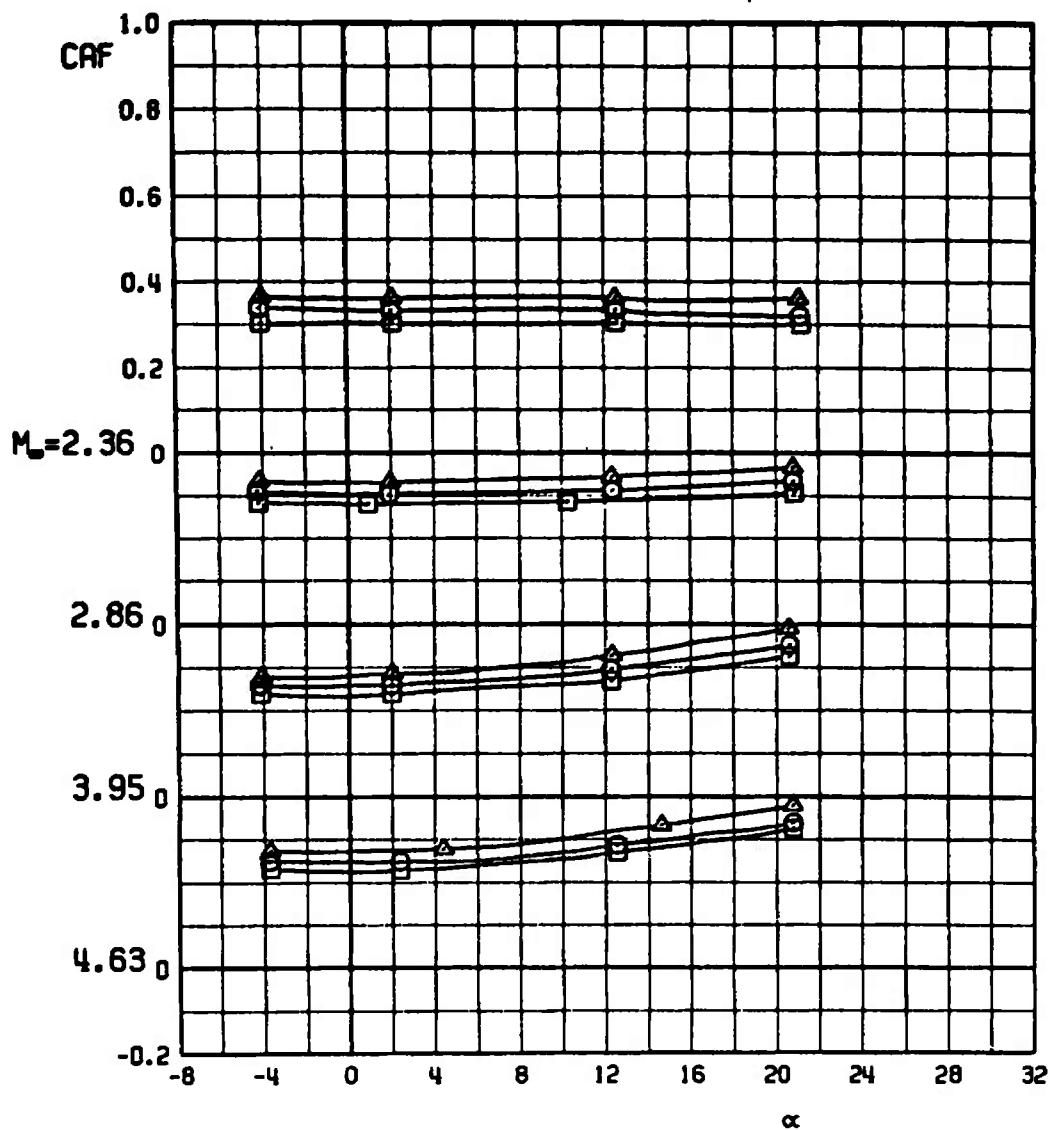
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	82WOF34	0	0	0	0	0	0
□	82WOF35	0	0	0	0	0	0
△	82WOF33	0	0	0	0	0	0



d. CAB versus α
Figure 29. Continued.

TEST CENTER LRC TEST 4

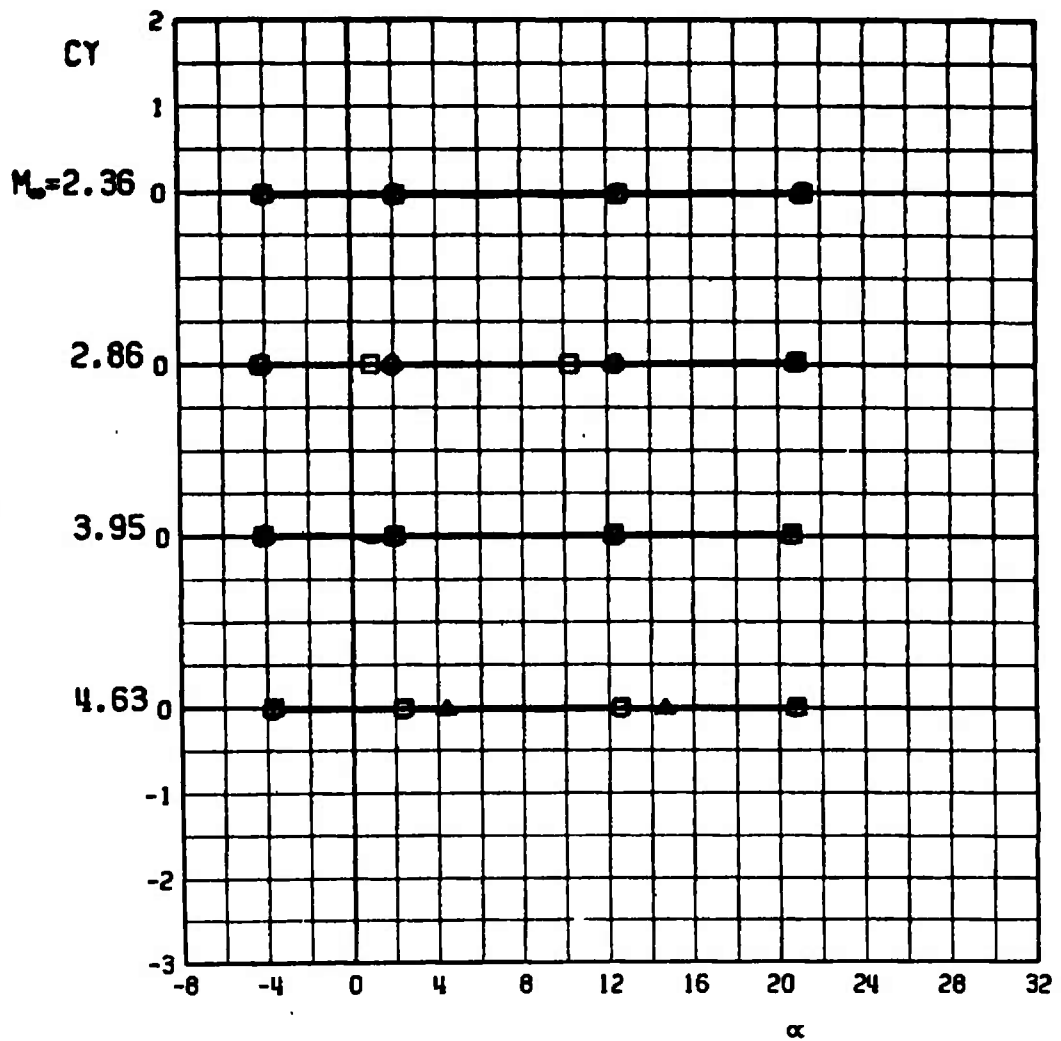
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF34	0	0	0	0	0	0
□	B2WOF35	0	0	0	0	0	0
△	B2WOF33	0	0	0	0	0	0



e. CAF versus α
Figure 29. Continued.

TEST CENTER LAC TEST 4

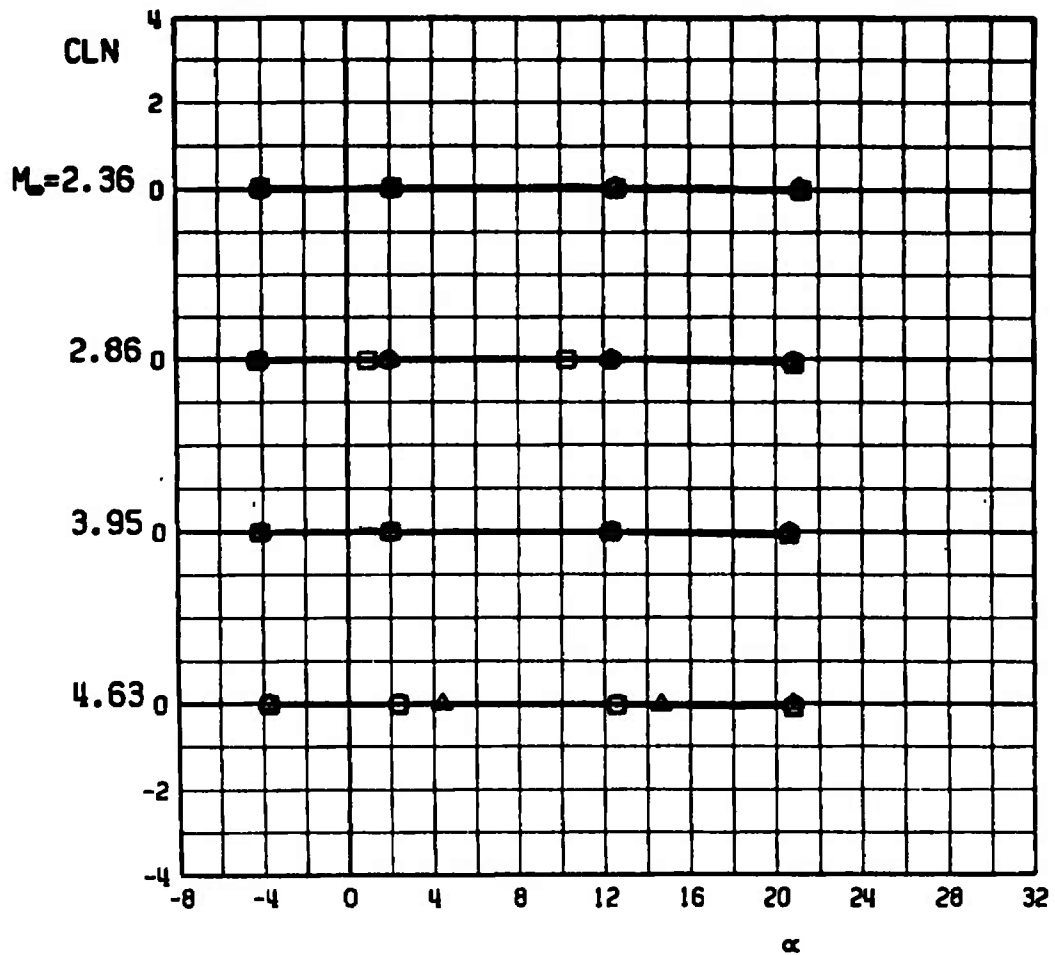
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B2HOF34	0	0	0	0	0	0
□	B2HOF35	0	0	0	0	0	0
△	B2HOF33	0	0	0	0	0	0



f. CY versus α
Figure 29. Continued.

TEST CENTER LAC TEST 4

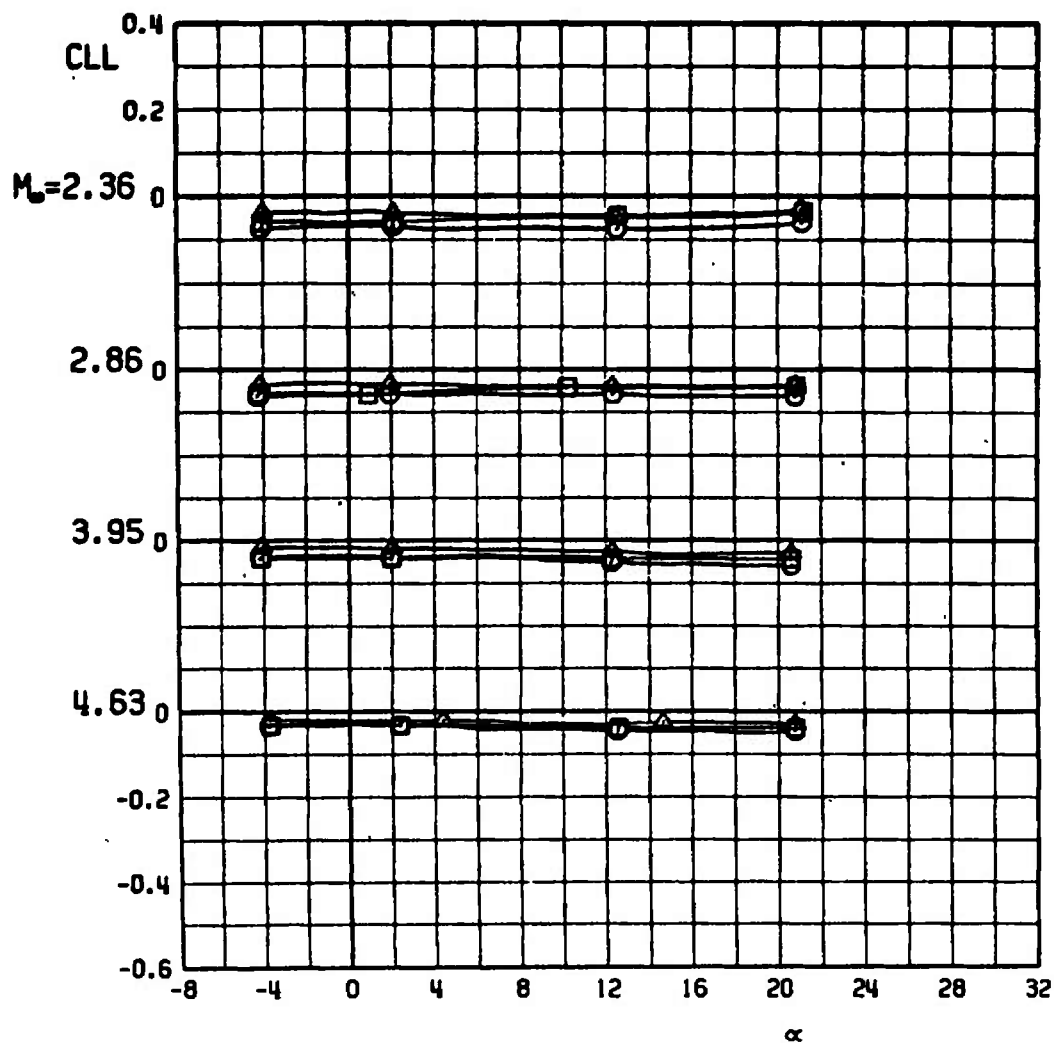
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B2WOF34	0	0	0	0	0	0
□	B2WOF35	0	0	0	0	0	0
△	B2WOF33	0	0	0	0	0	0



g. CLN versus α
Figure 29. Continued.

TEST CENTER LRC TEST 4

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B2WOF34	0	0	0	0	0	0
□	B2WOF35	0	0	0	0	0	0
△	B2WOF33	0	0	0	0	0	0



h. CLL versus α
Figure 29. Concluded.

TEST CENTER LAC TEST 5

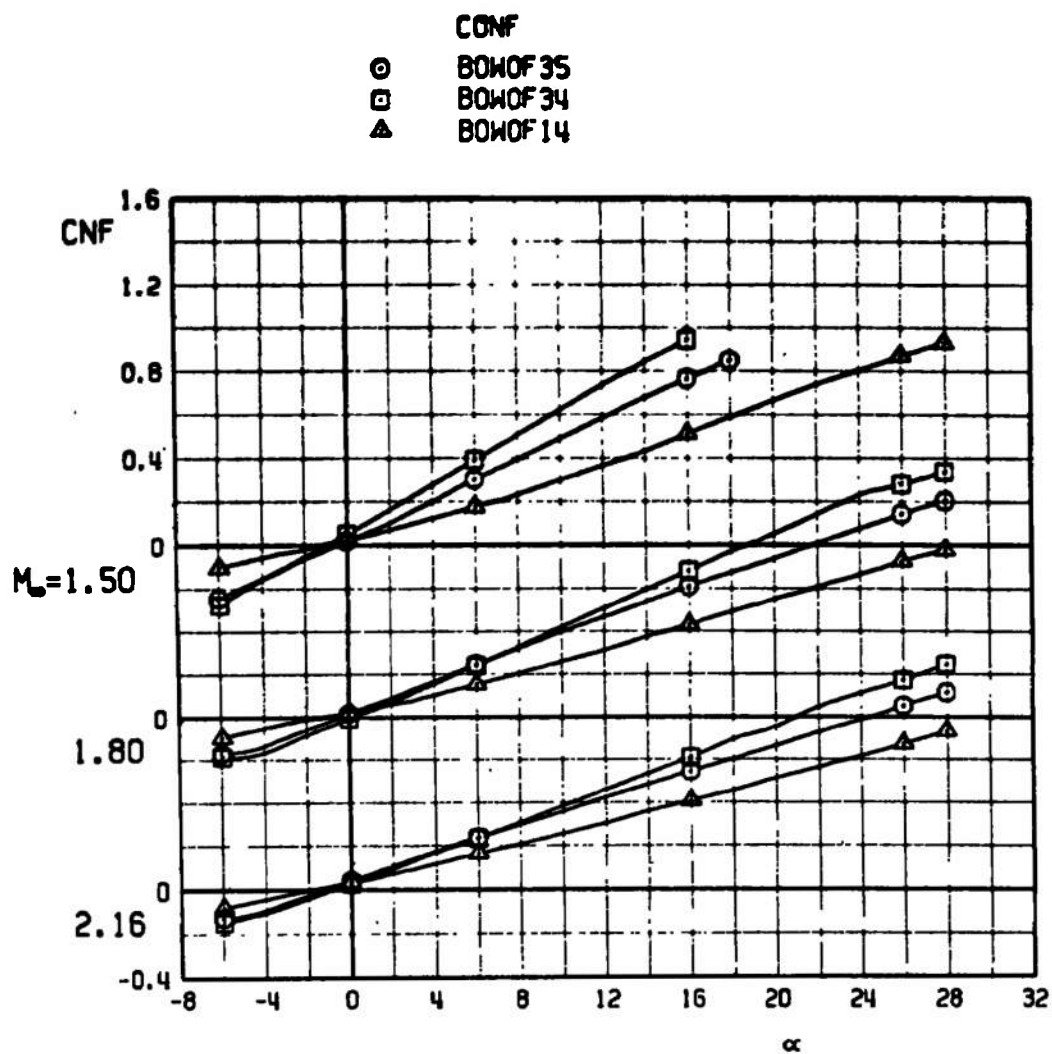
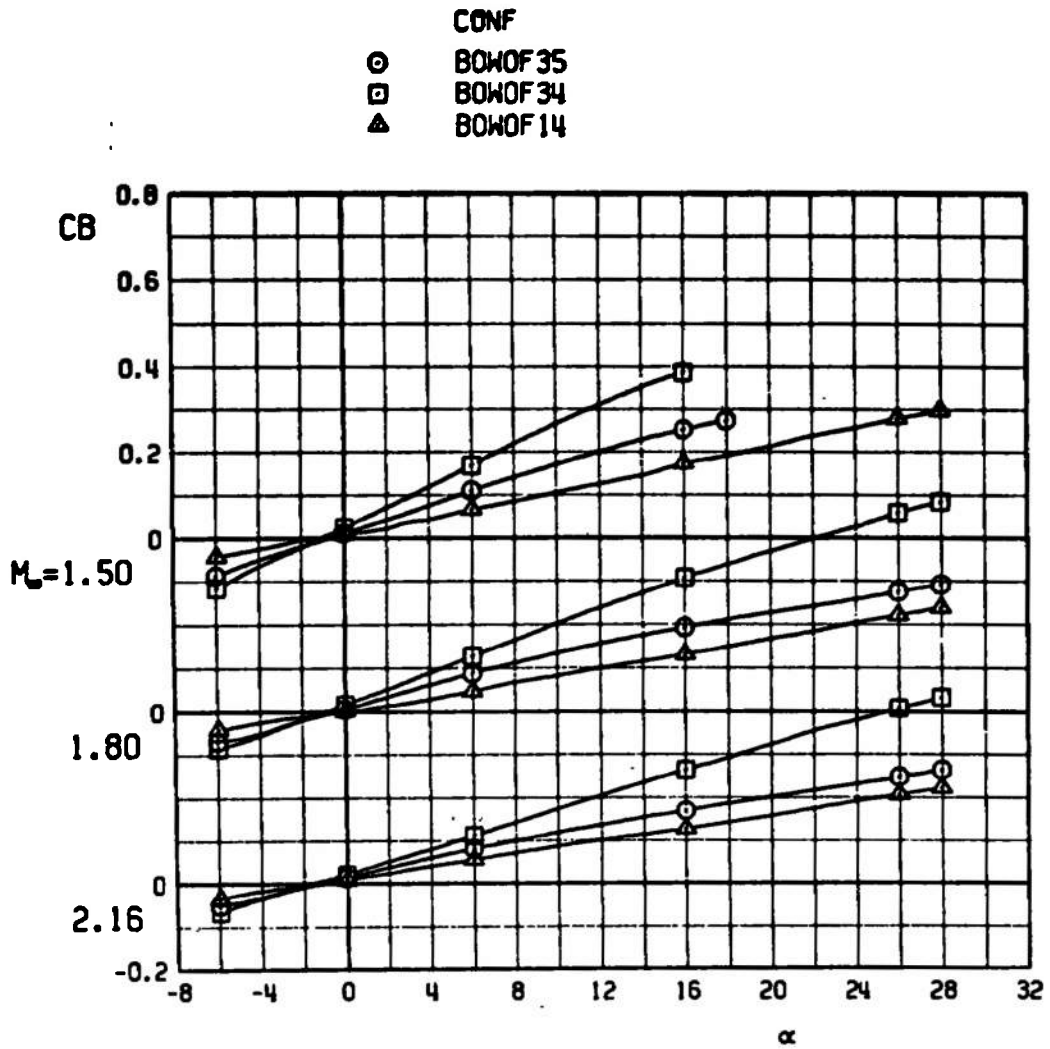
a. CNF versus α

Figure 30. Test No. 5, comparison of aerodynamic coefficients of configurations BOWOF35, BOWOF34, and BOWOF14.

TEST CENTER LRC TEST 5

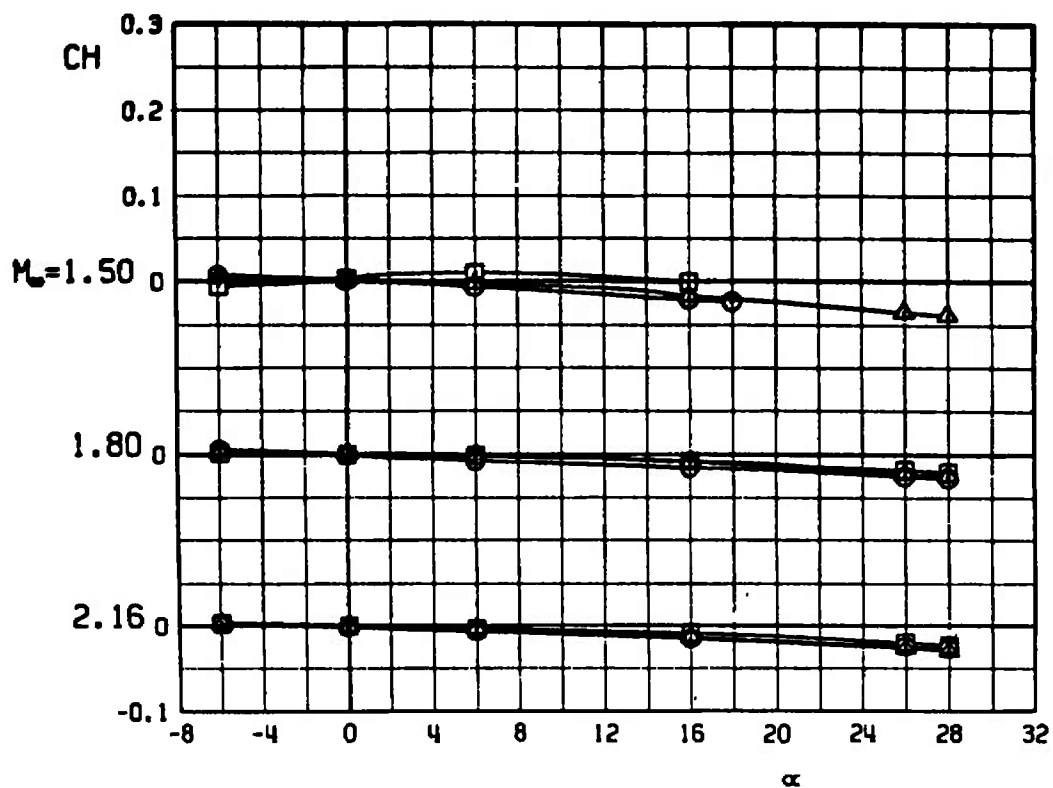


b. CB versus α
Figure 30. Continued.

TEST CENTER LAC TEST 5

CONF

○ BOWOF35
 □ BOWOF34
 ▲ BOWOF14



c. CH versus α
Figure 30. Concluded.

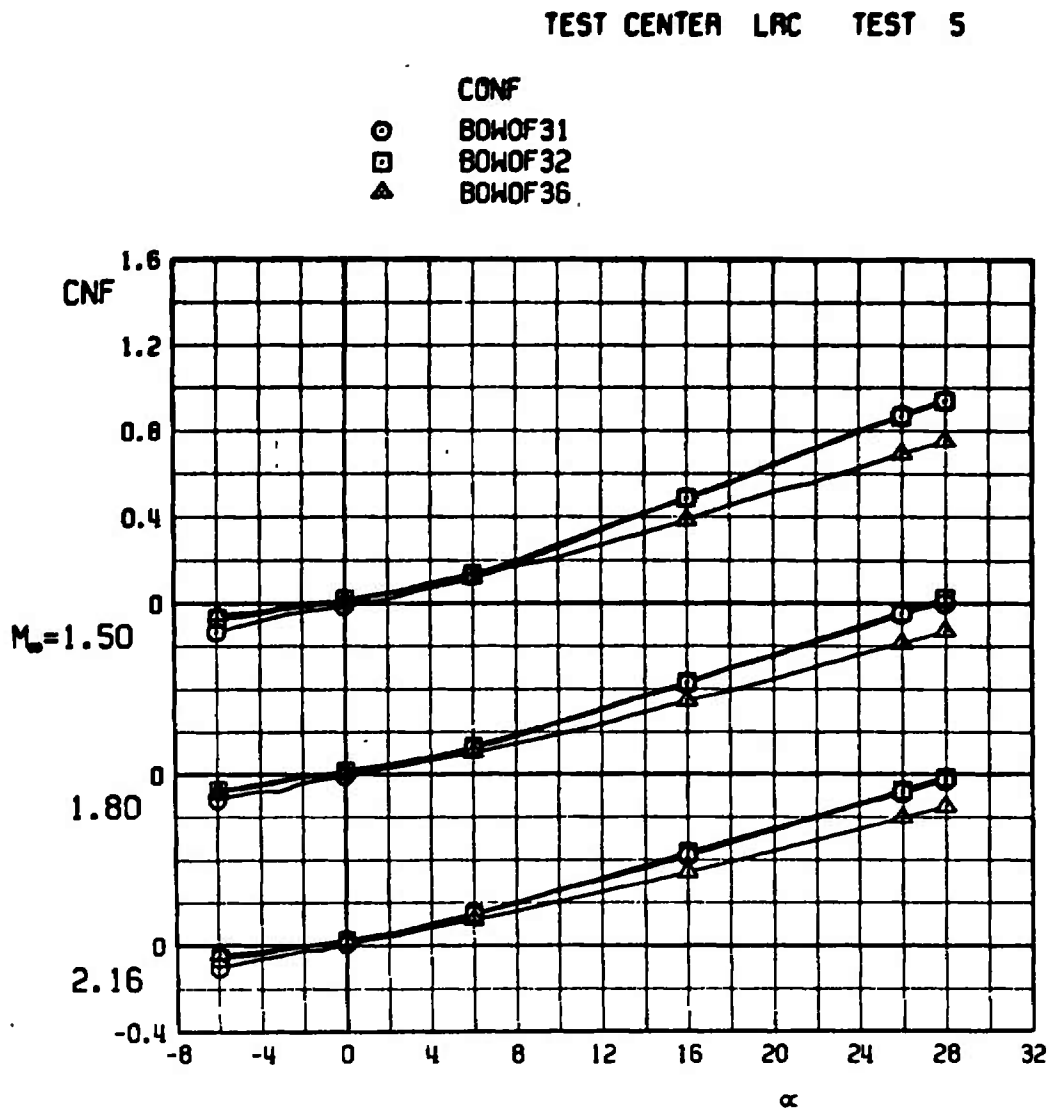
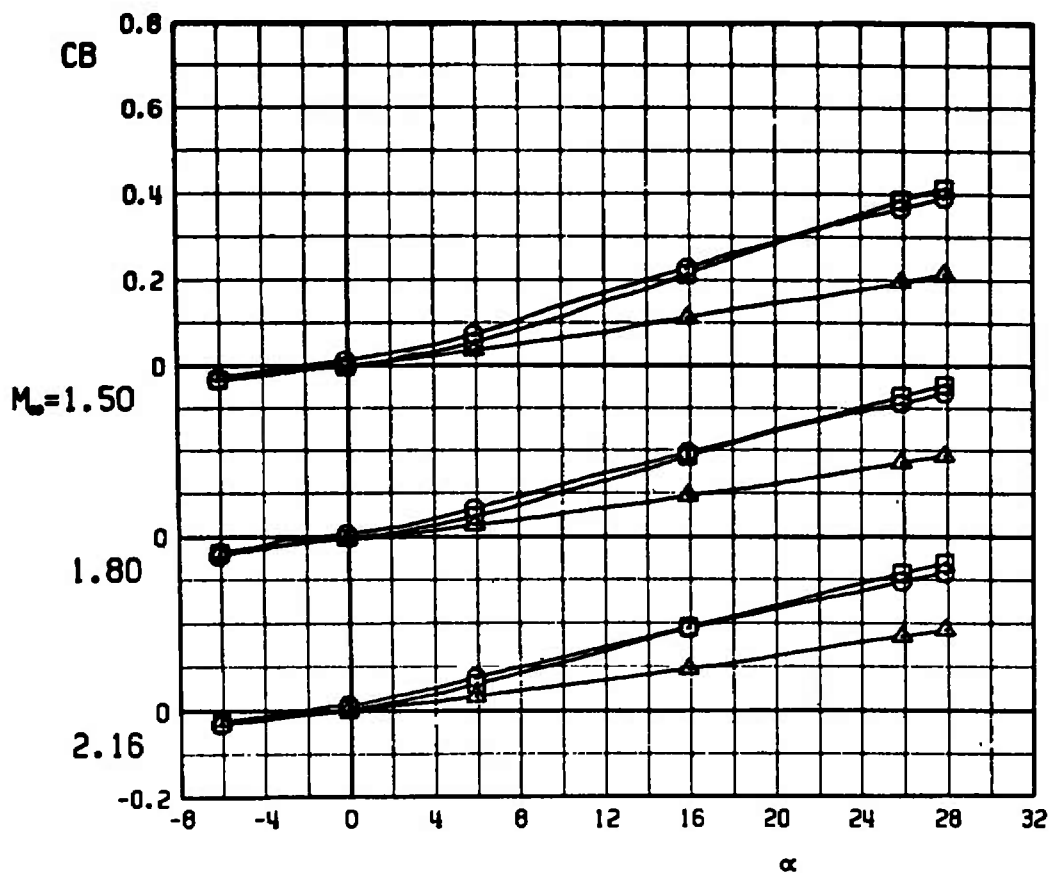
a. CNF versus α

Figure 31. Test No. 5, comparison of aerodynamic coefficients of configurations BOWOF31, BOWOF32, and BOWOF36.

TEST CENTER LRC TEST 5

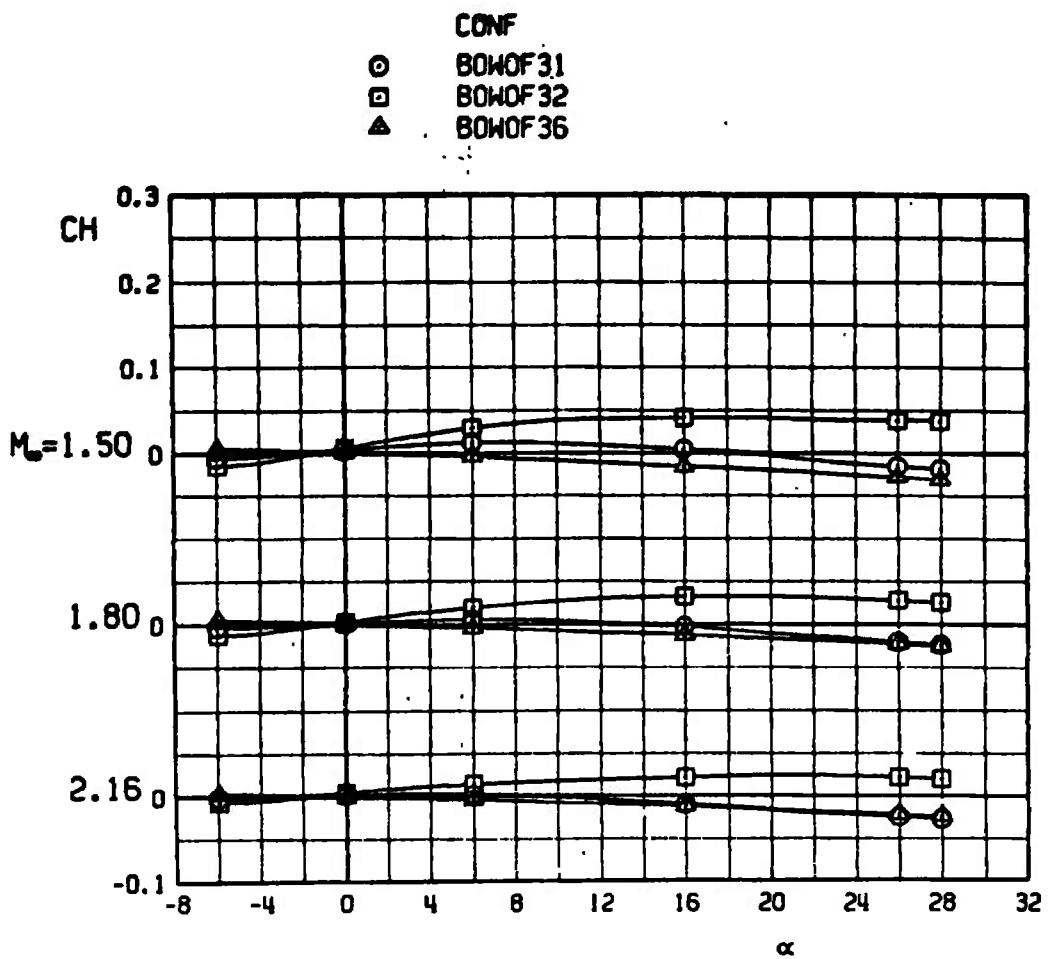
CONF

○ 80WOF31
 □ 80WOF32
 ▲ 80WOF36



b. CB versus α
 Figure 31. Continued.

TEST CENTER LRC TEST 5



c. CH versus α
 Figure 31. Concluded.

TEST CENTER LRC TEST 5

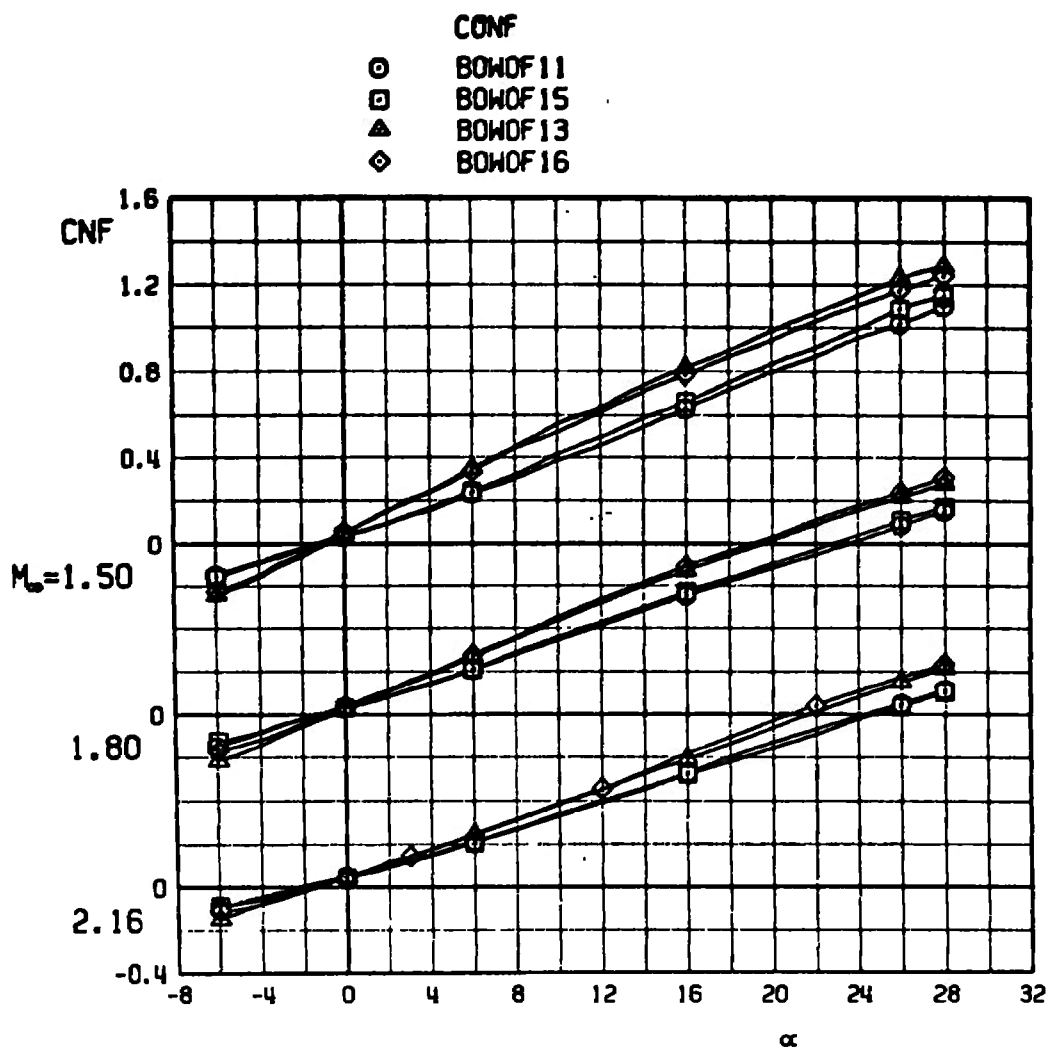
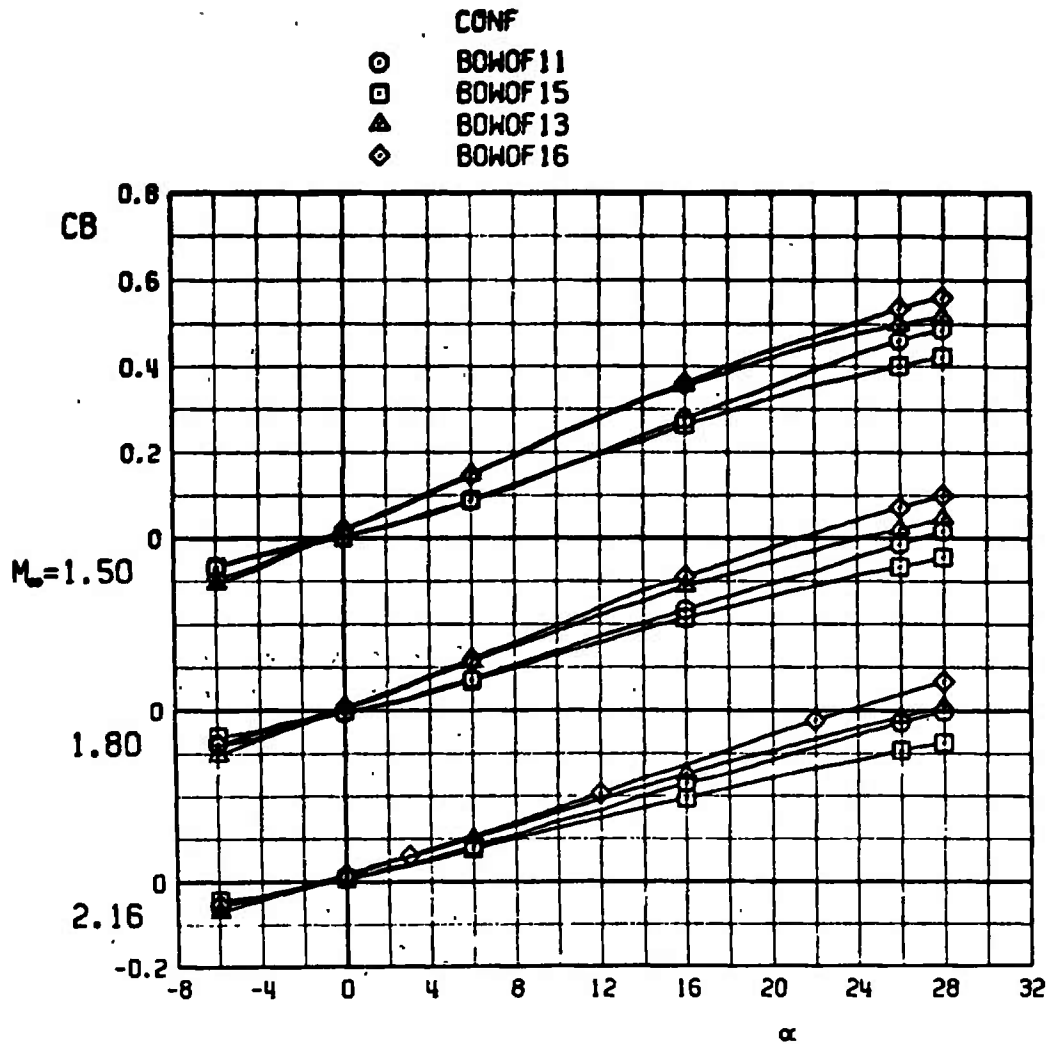
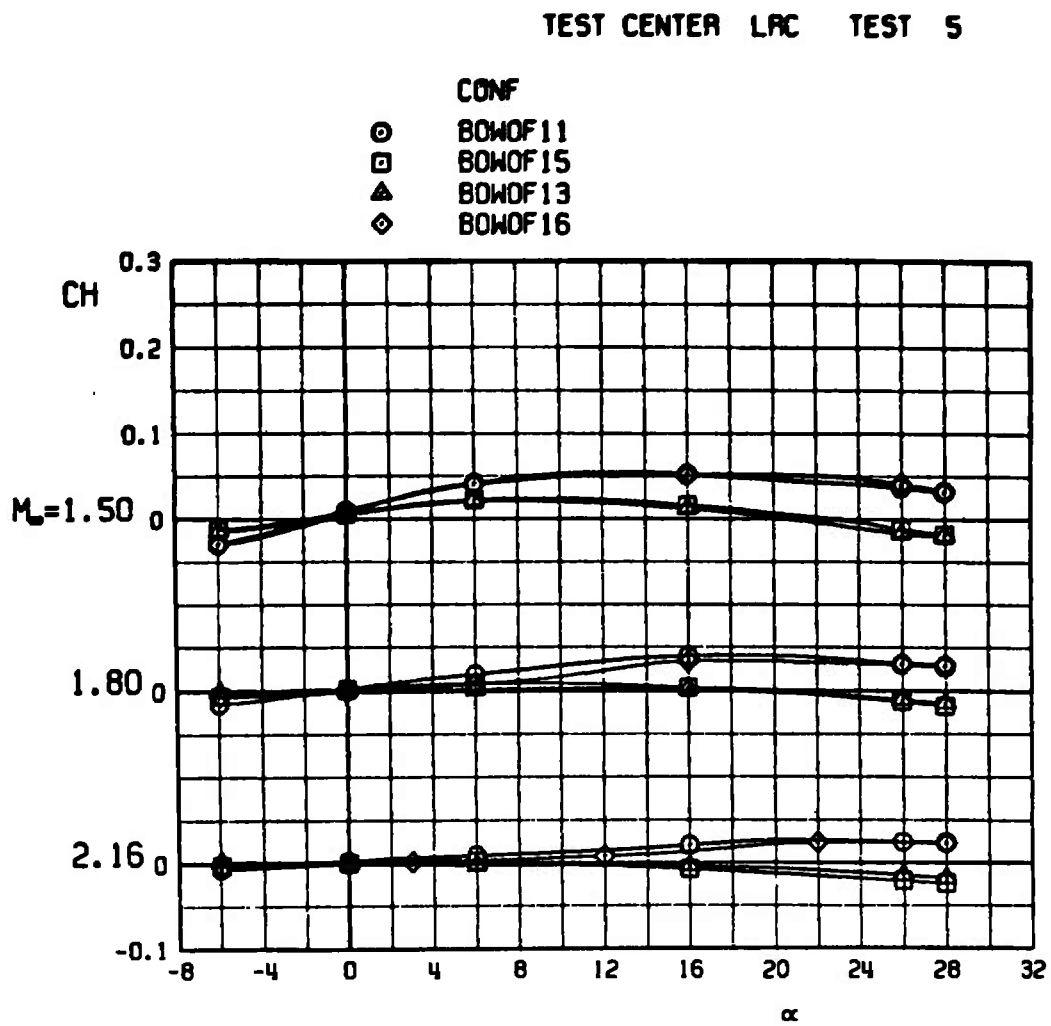
a. CNF versus α

Figure 32. Test No. 5, comparison of aerodynamic coefficients of configurations BOWOF11, BOWOF15, BOWOF13, and BOWOF16.

TEST CENTER LAC TEST 5



b. CB versus α
Figure 32. Continued.



c. CH versus α
Figure 32. Concluded.

TEST CENTER NSRDC TEST 6

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W0F12	0	10	0	10	0	0
□	B2W0F12	0	20	0	20	0	0
△	B2W0F12	0	30	0	30	0	0

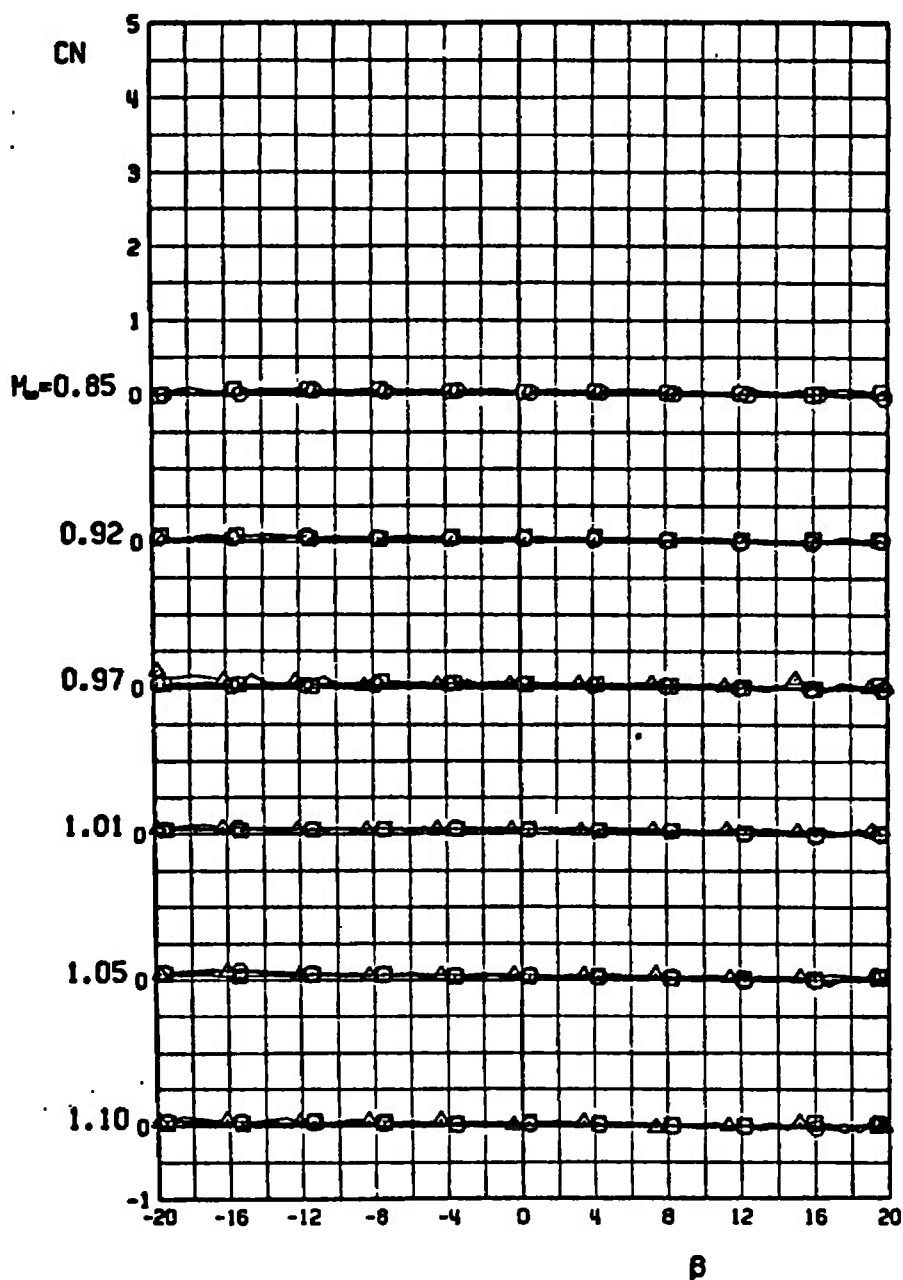
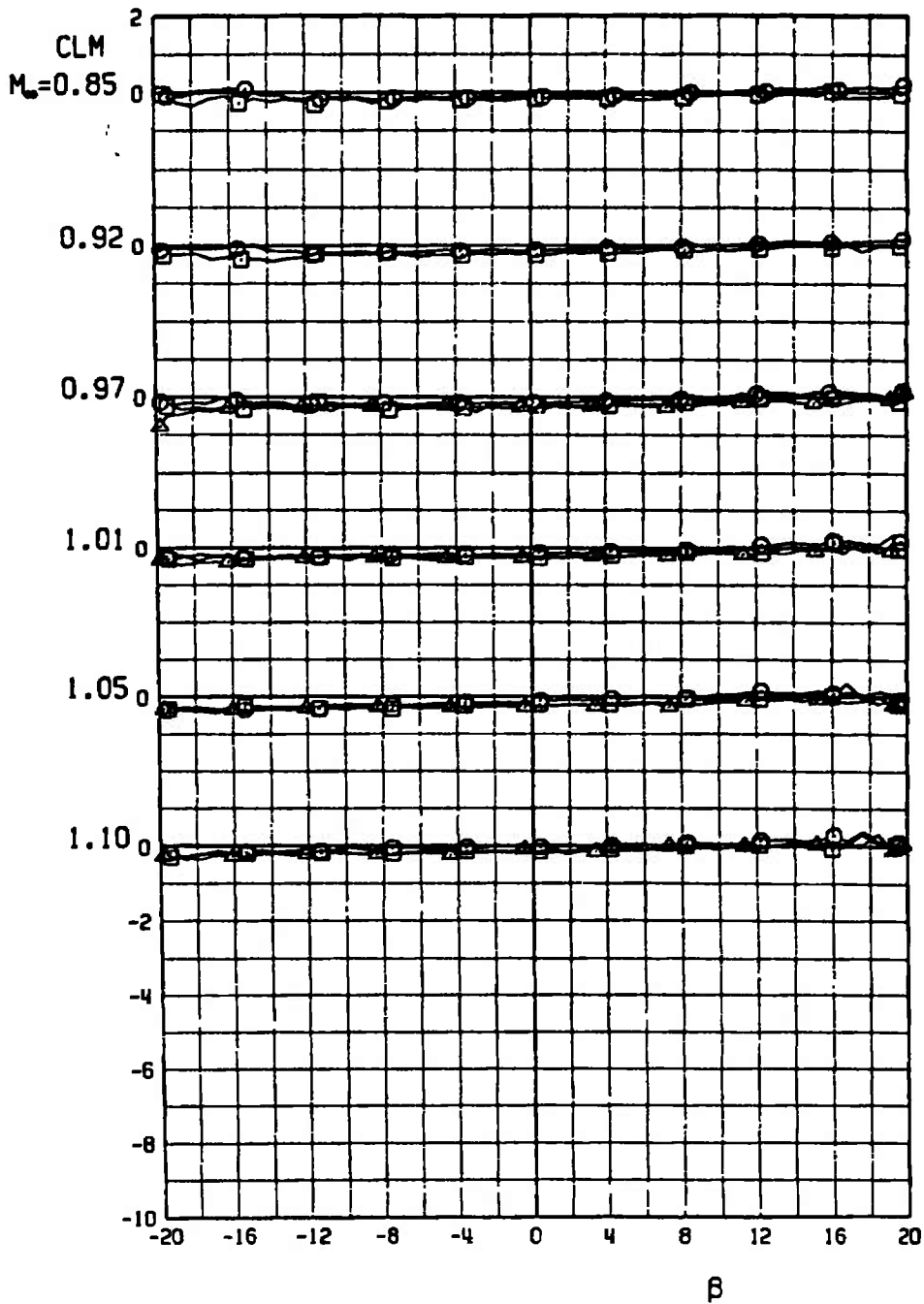
a. CN versus β

Figure 33. Test No. 6, comparison of aerodynamic coefficients of configuration B2W0F12 for various deflections of tail fins No. 1 and 3.

TEST CENTER NSRDC TEST 6

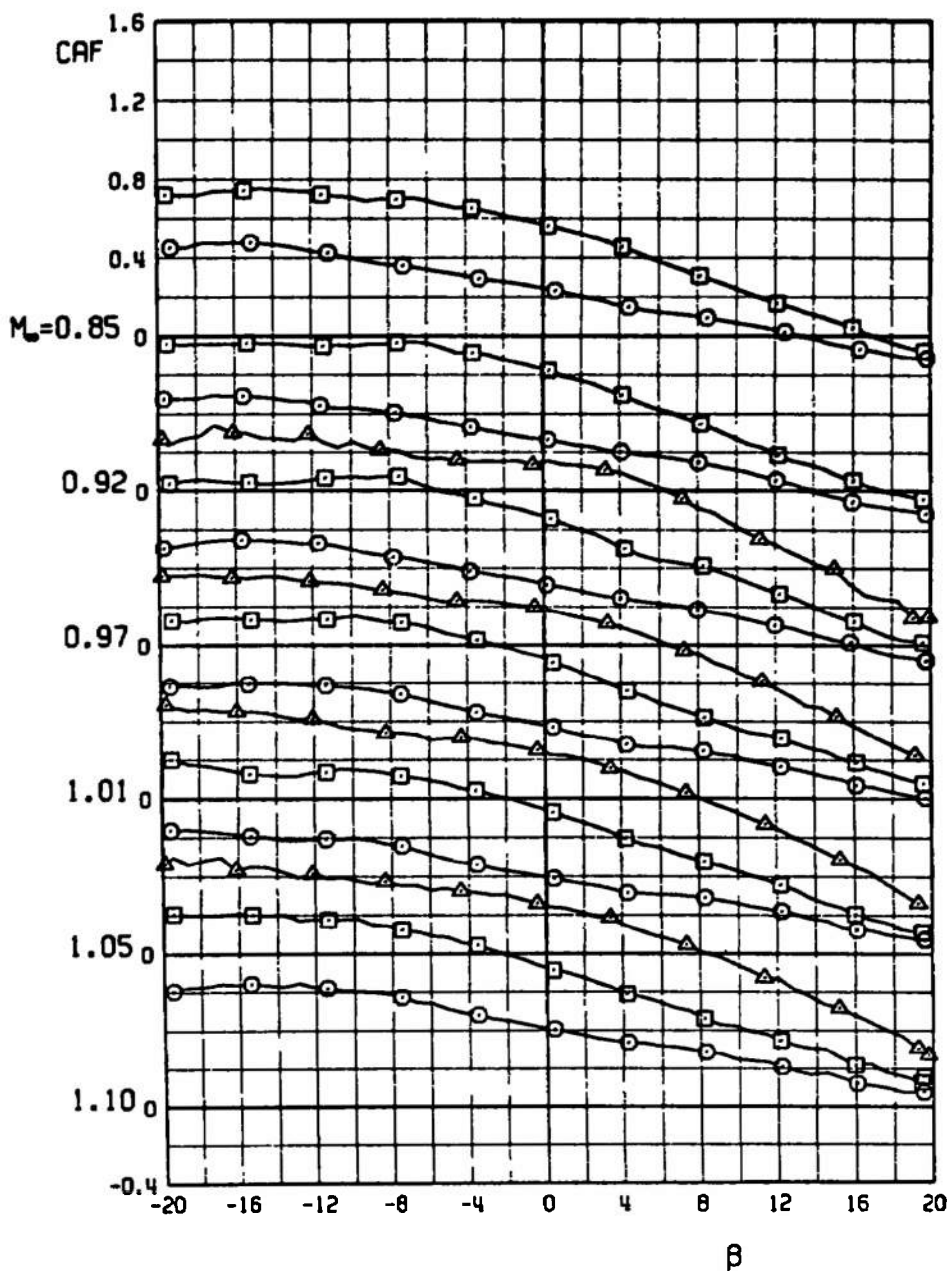
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF12	0	10	0	10	0	0
□	B2WOF12	0	20	0	20	0	0
△	B2WOF12	0	30	0	30	0	0



b. CLM versus β
Figure 33. Continued.

TEST CENTER NSRDC TEST 6

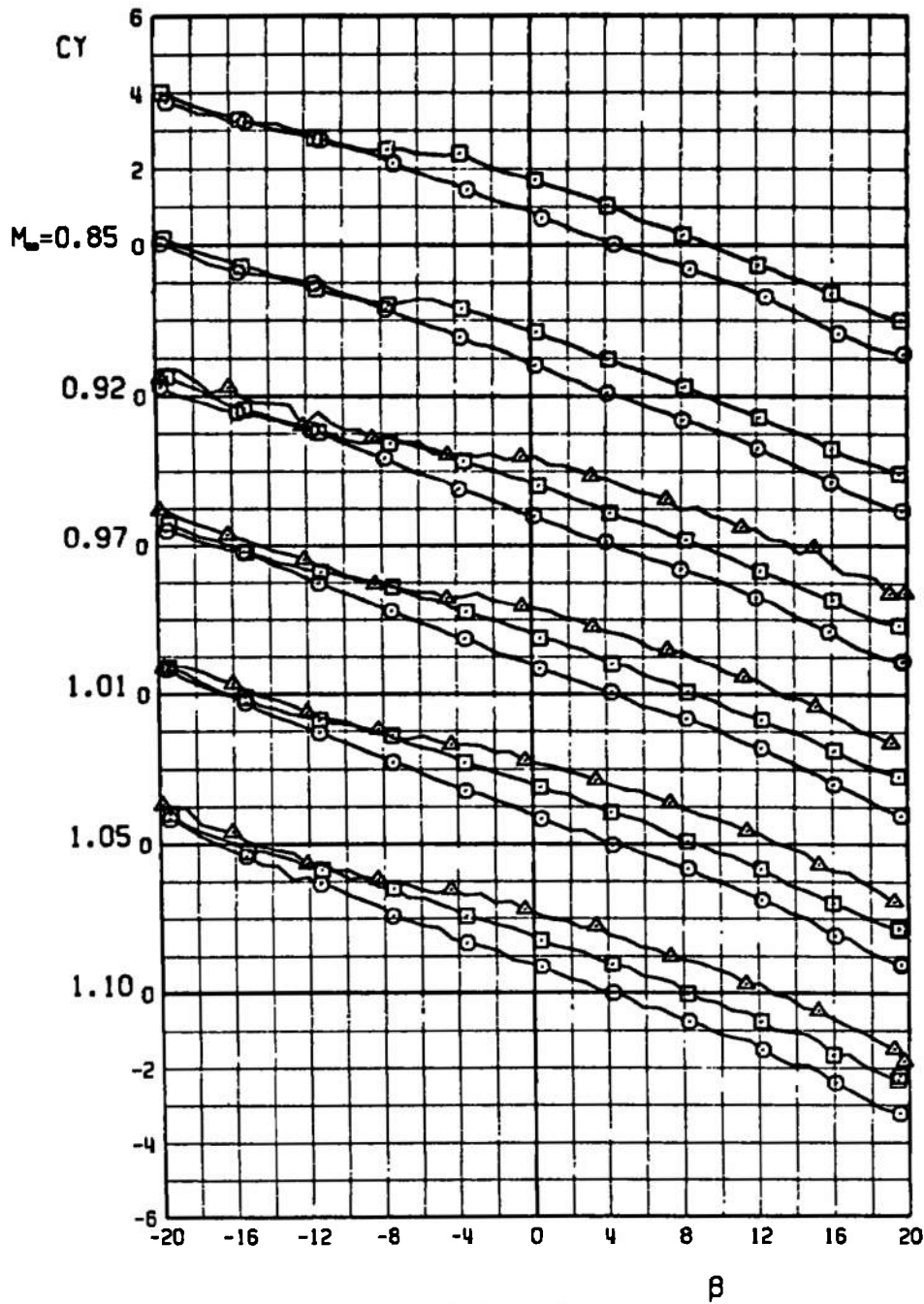
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF12	0	10	0	10	0	0
□	B2WOF12	0	20	0	20	0	0
△	B2WOF12	0	30	0	30	0	0



c. CAF versus β
Figure 33. Continued.

TEST CENTER NSRDC TEST 6

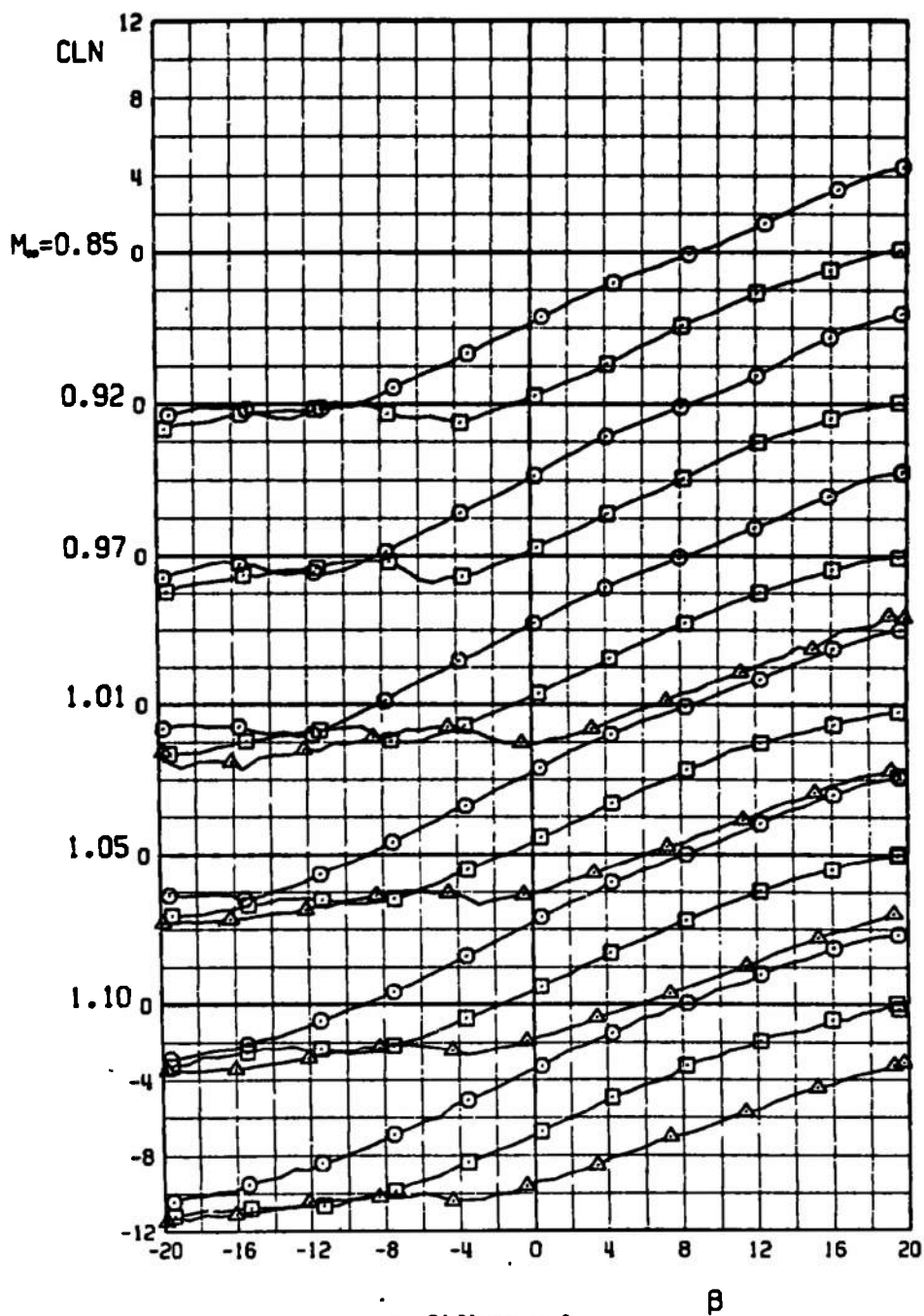
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF12	0	10	0	10	0	0
□	B2WOF12	0	20	0	20	0	0
△	B2WOF12	0	30	0	30	0	0



d. C_Y versus β
Figure 33. Continued.

TEST CENTER NSRDC TEST 6

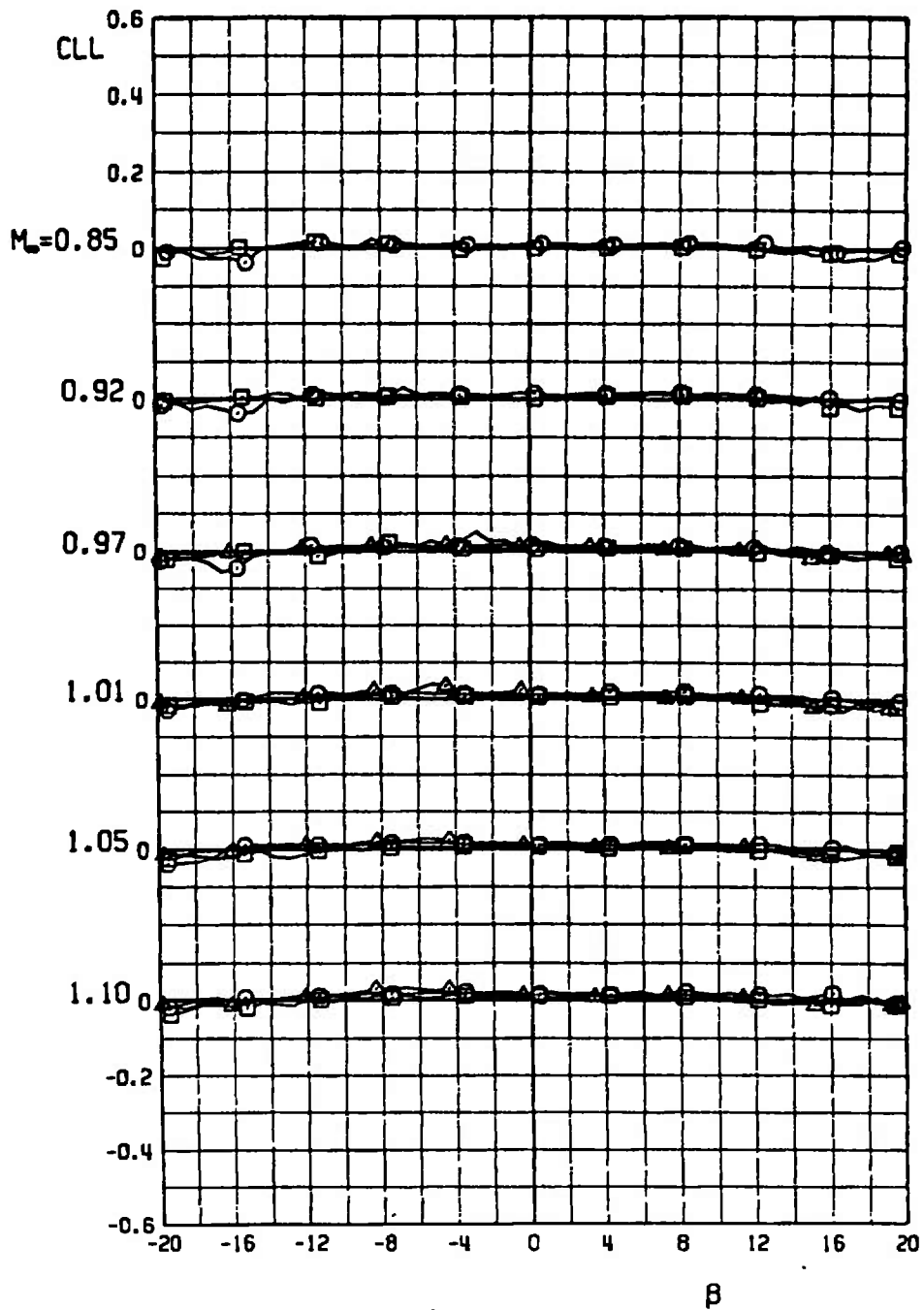
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF12	0	10	0	10	0	0
□	B2WOF12	0	20	0	20	0	0
△	B2WOF12	0	30	0	30	0	0



e. CLN versus β
Figure 33. Continued.

TEST CENTER NSRDC TEST 6

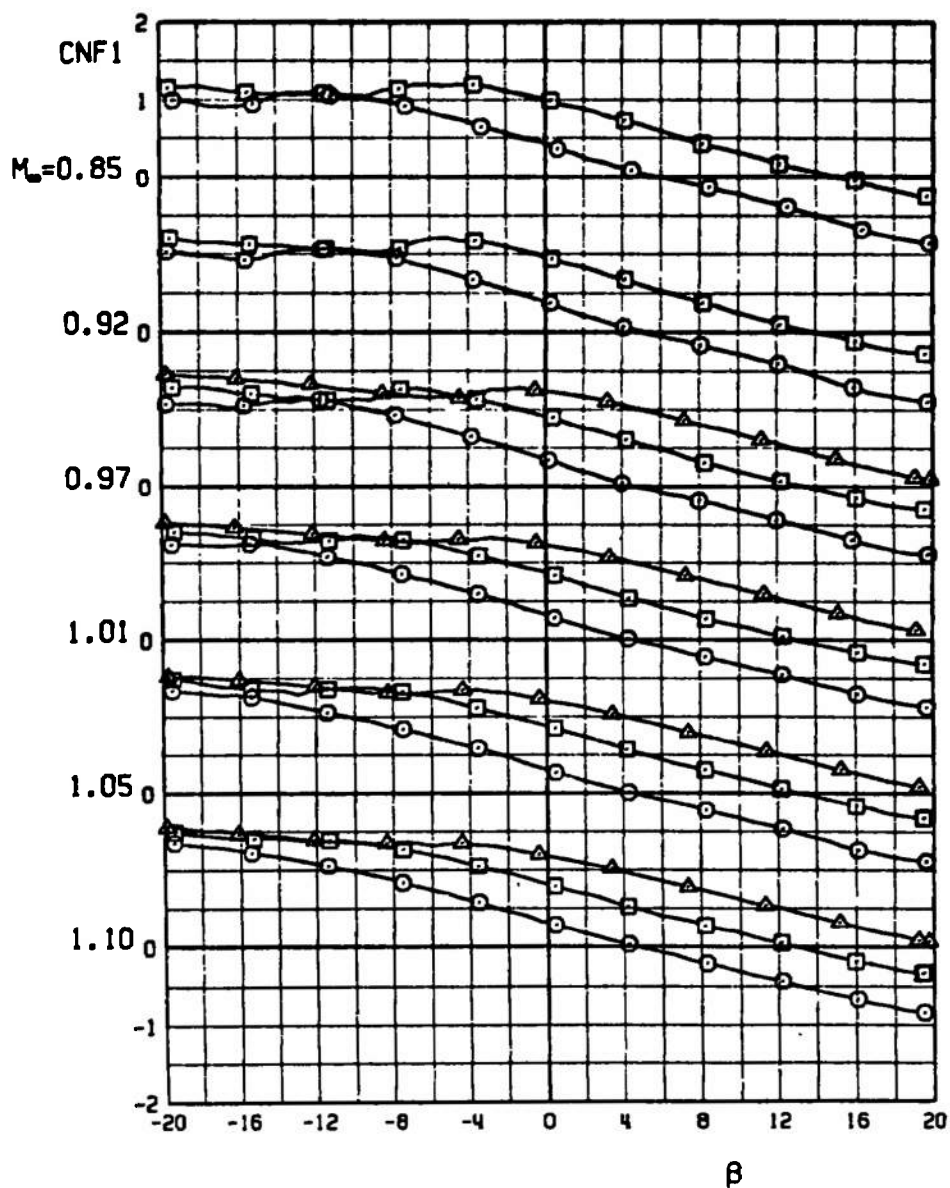
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF12	0	10	0	10	0	0
□	B2WOF12	0	20	0	20	0	0
△	B2WOF12	0	30	0	30	0	0



f. CLL versus β
Figure 33. Continued.

TEST CENTER NSRDC TEST 6

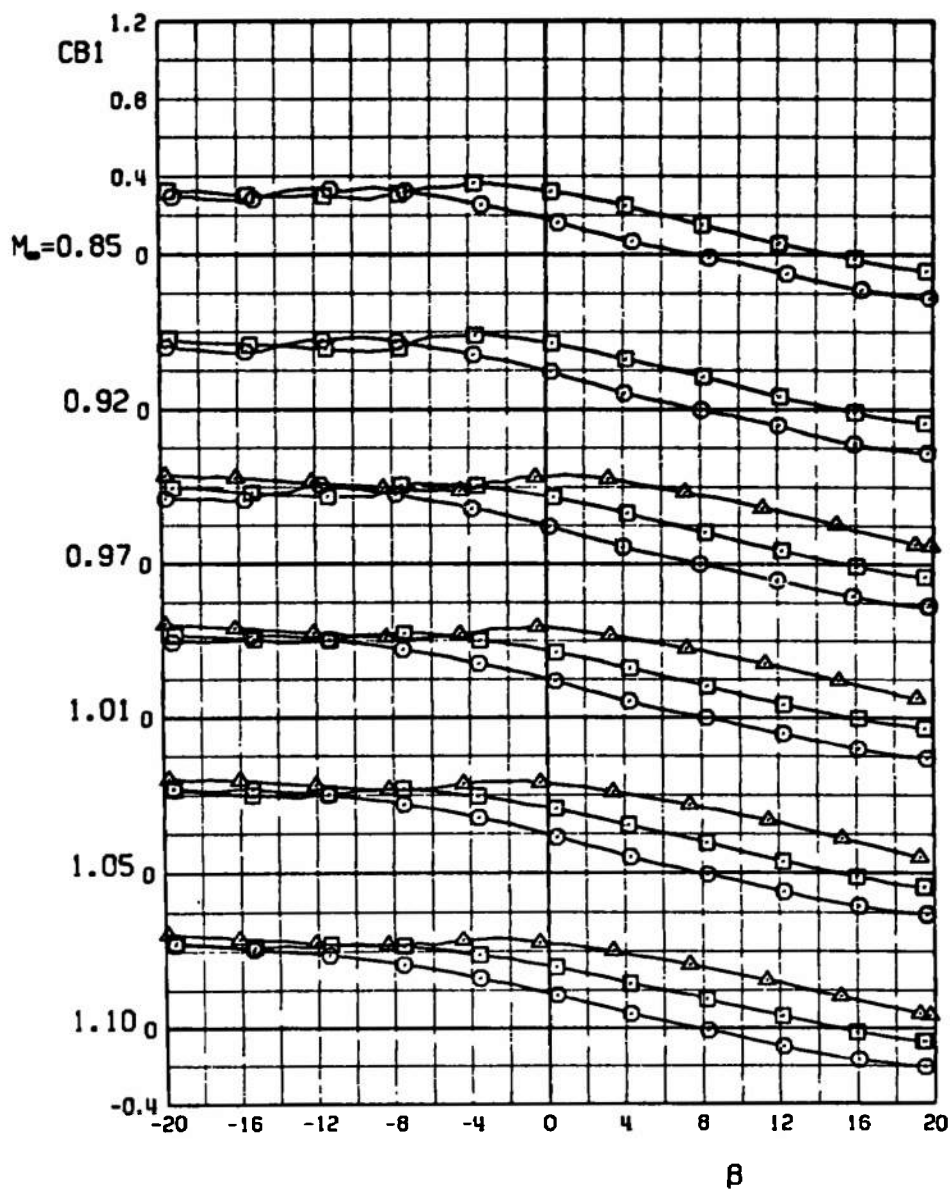
	CNF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF12	0	10	0	10	0	0
□	B2WOF12	0	20	0	20	0	0
△	B2WOF12	0	30	0	30	0	0



g. CNF1 versus β
Figure 33. Continued.

TEST CENTER NSRDC TEST 6

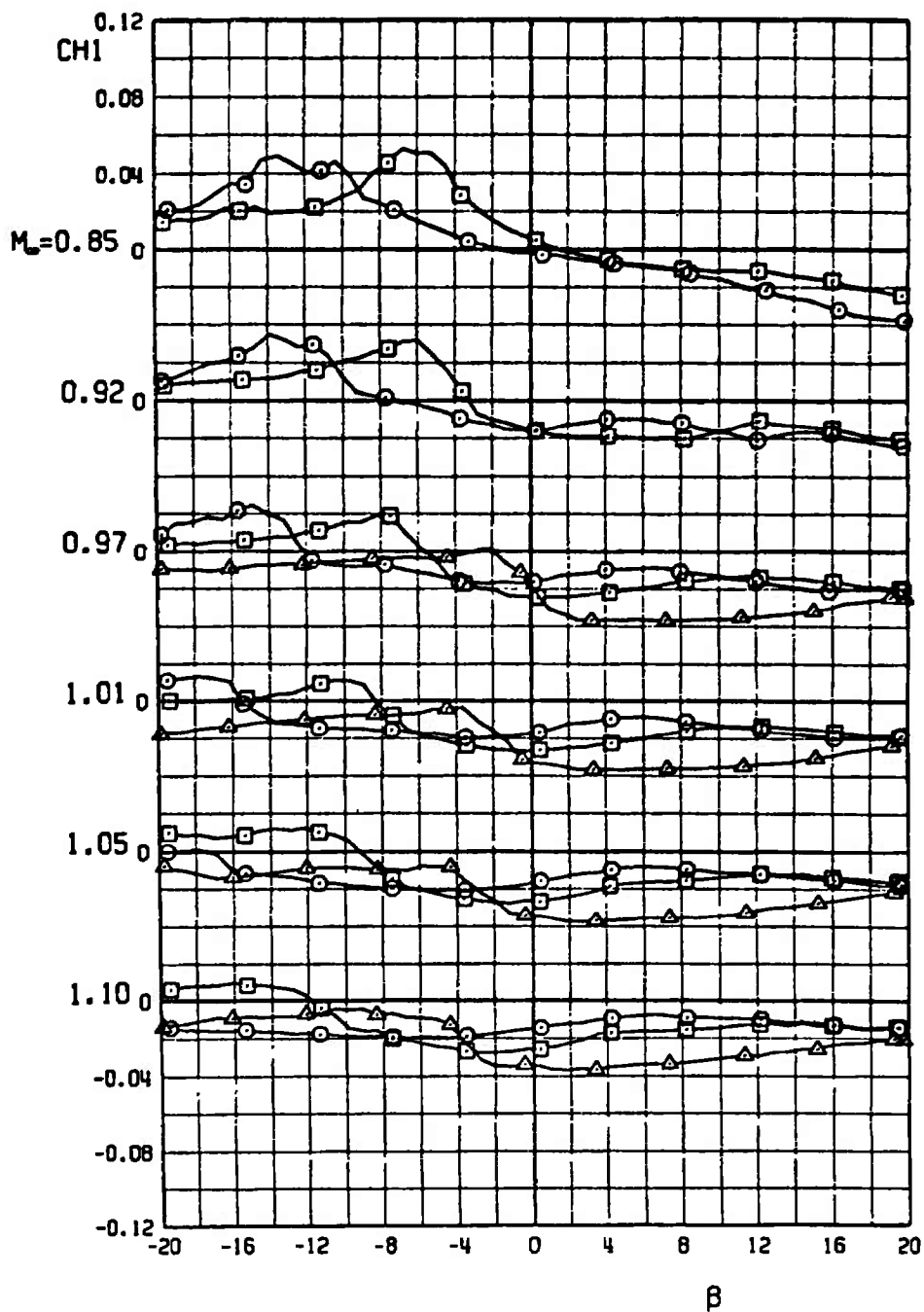
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF12	0	10	0	10	0	0
□	B2WOF12	0	20	0	20	0	0
△	B2WOF12	0	30	0	30	0	0



h. CB_1 versus β
Figure 33. Continued.

TEST CENTER NSRDC TEST 6

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF12	0	10	0	10	0	0
□	B2WOF12	0	20	0	20	0	0
△	B2WOF12	0	30	0	30	0	0



i. CH1 versus β
Figure 33. Concluded.

TEST CENTER NSRDC TEST 6

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W0F13	0	10	0	10	0	0
□	B2W0F13	0	20	0	20	0	0
△	B2W0F13	0	30	0	30	0	0

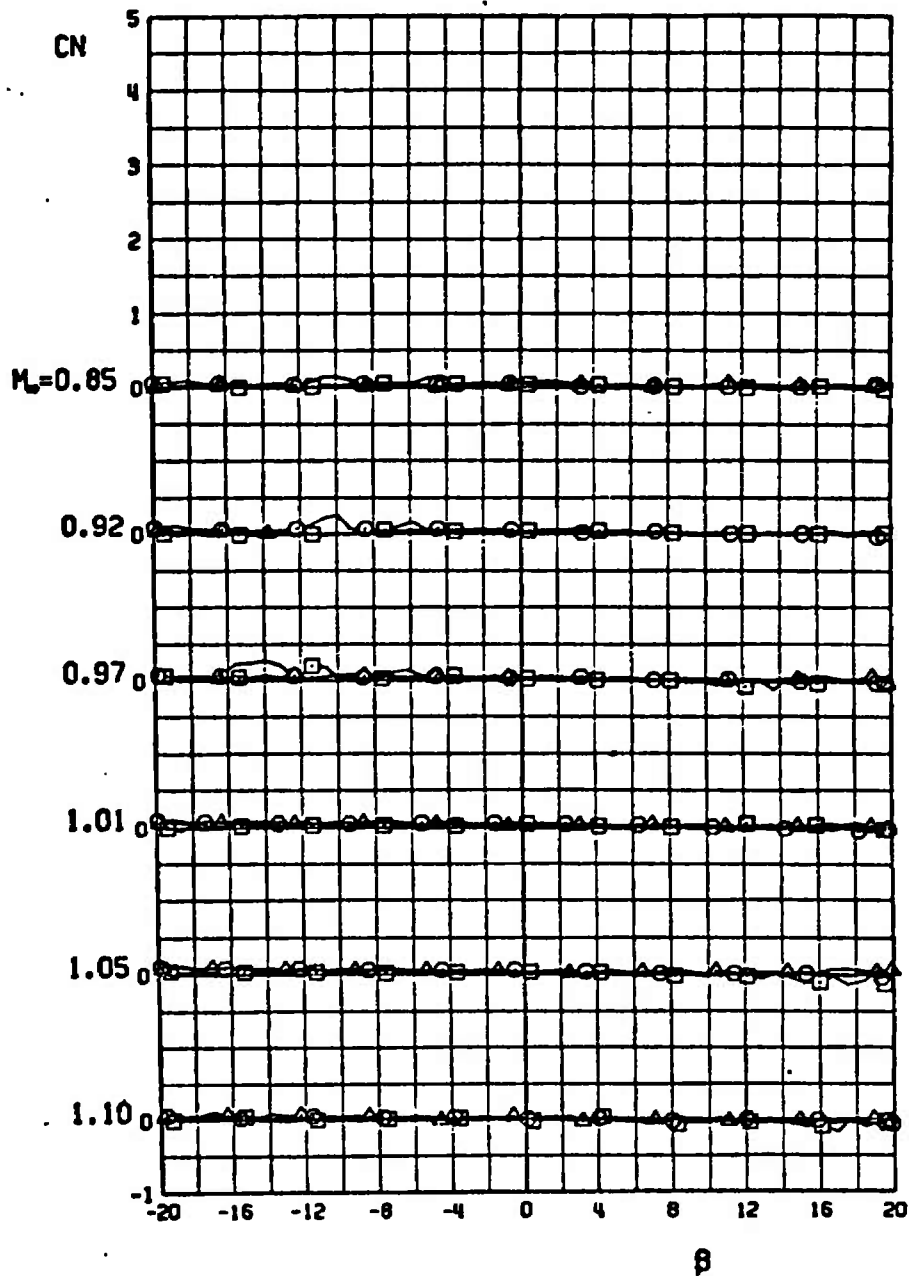
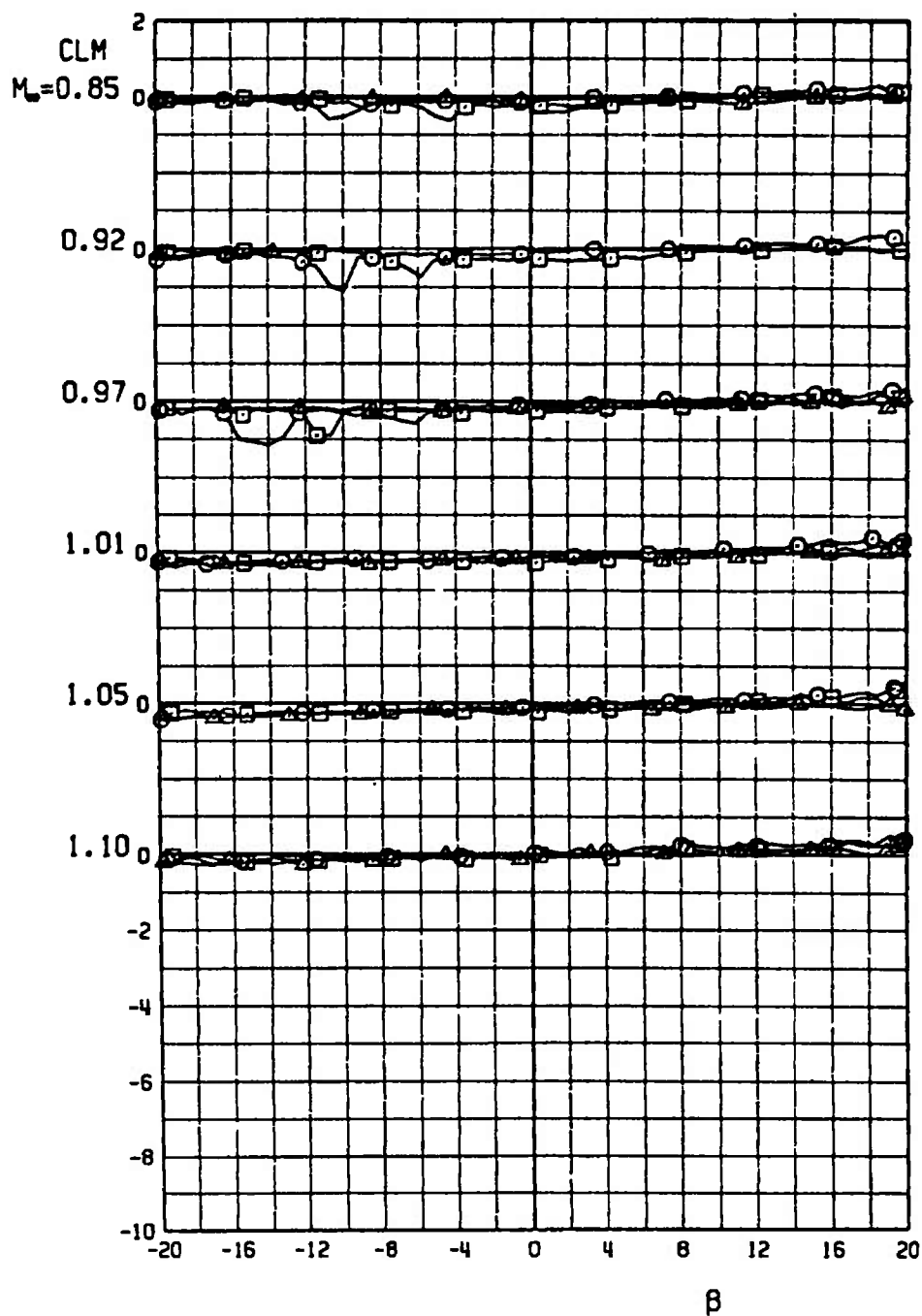
a. C_N versus β

Figure 34. Test No. 6, comparison of aerodynamic coefficients of configuration B2W0F13 for various deflections of tail fins No. 1 and 3.

TEST CENTER NSRDC TEST 6

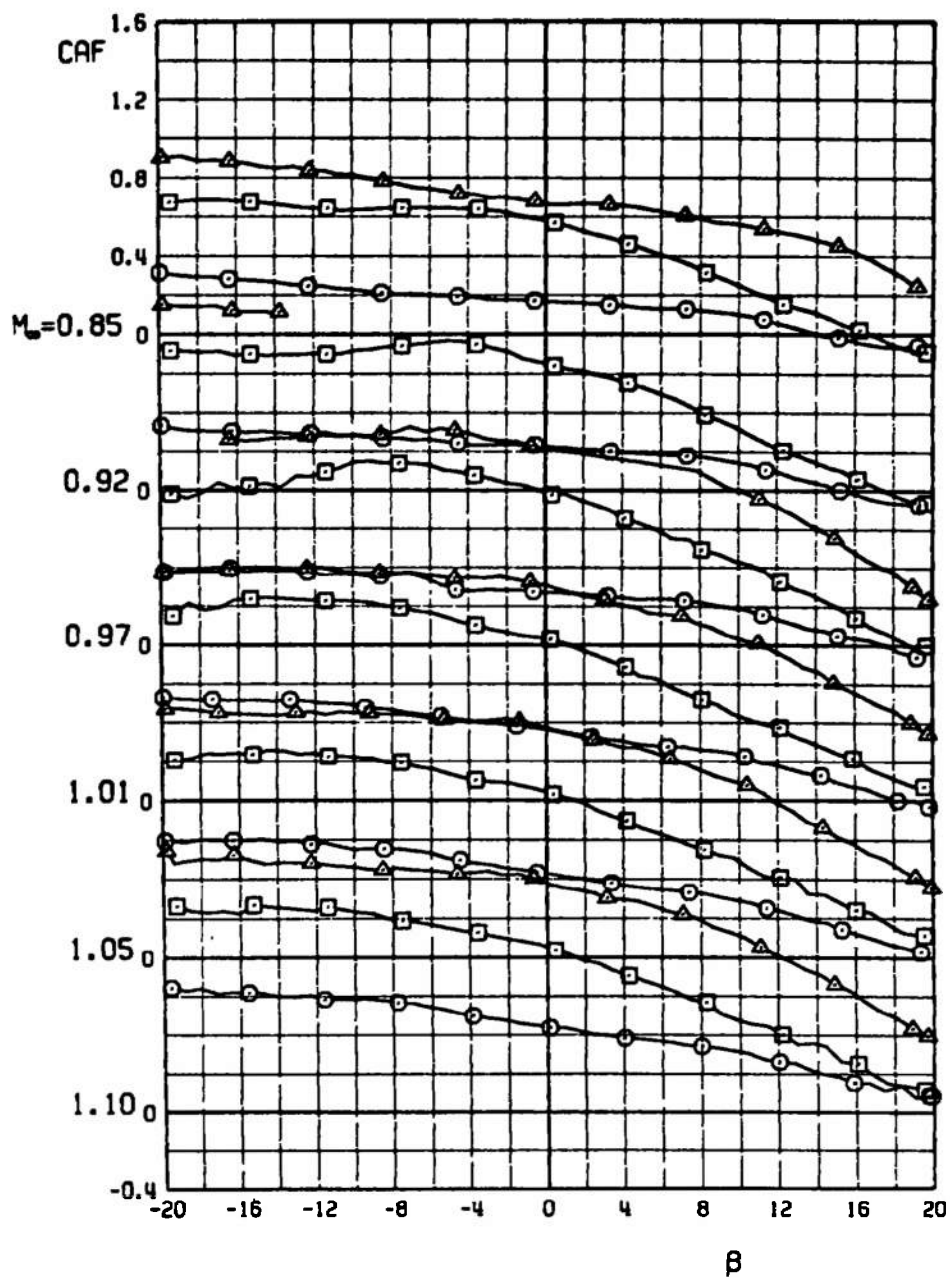
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF13	0	10	0	10	0	0
□	B2WOF13	0	20	0	20	0	0
△	B2WOF13	0	30	0	30	0	0



b. CLM versus β
Figure 34. Continued.

TEST CENTER NSRDC TEST 6

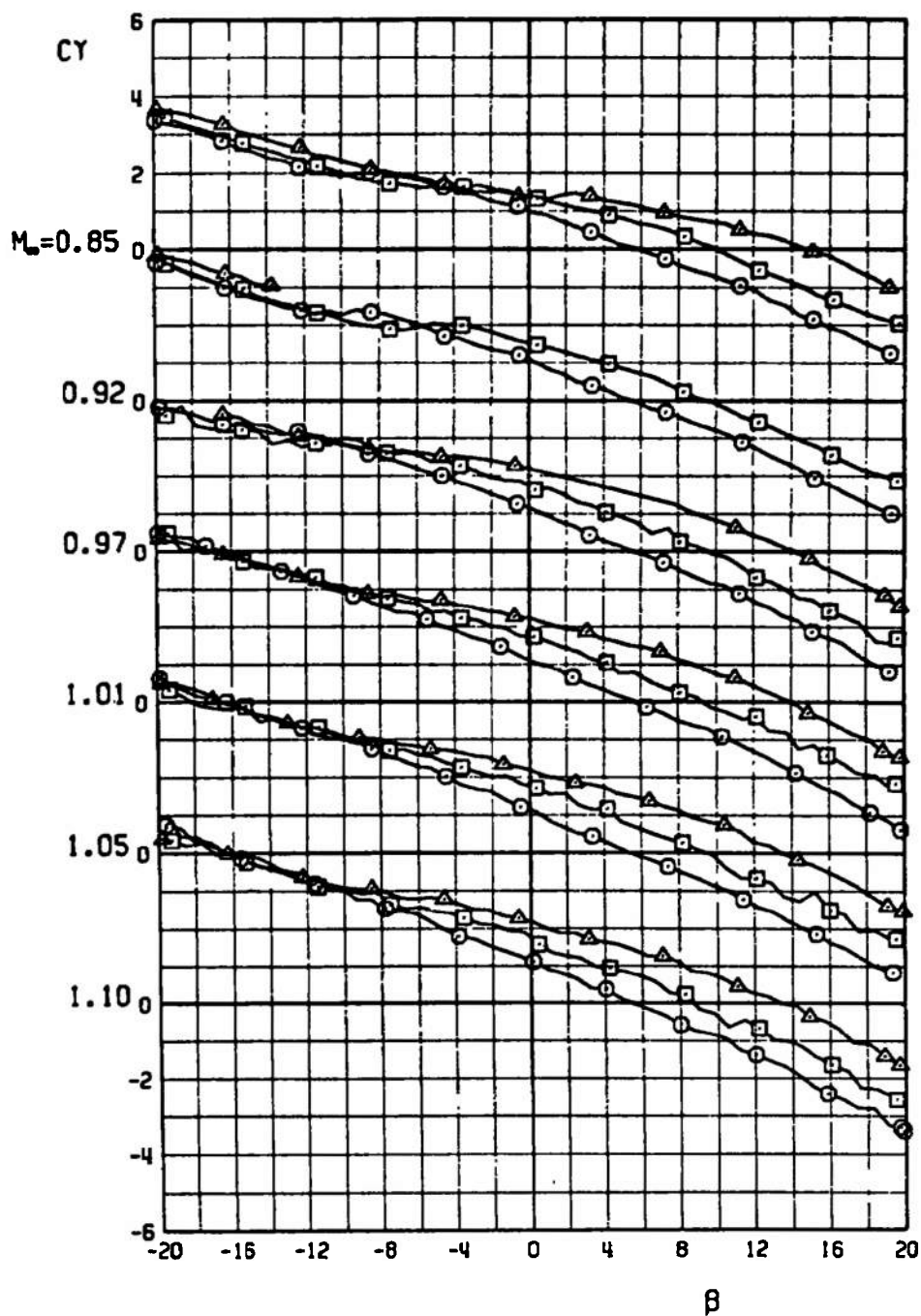
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF13	0	10	0	10	0	0
□	B2WOF13	0	20	0	20	0	0
△	B2WOF13	0	30	0	30	0	0



c. CAF versus β
Figure 34. Continued.

TEST CENTER NSROC TEST 6

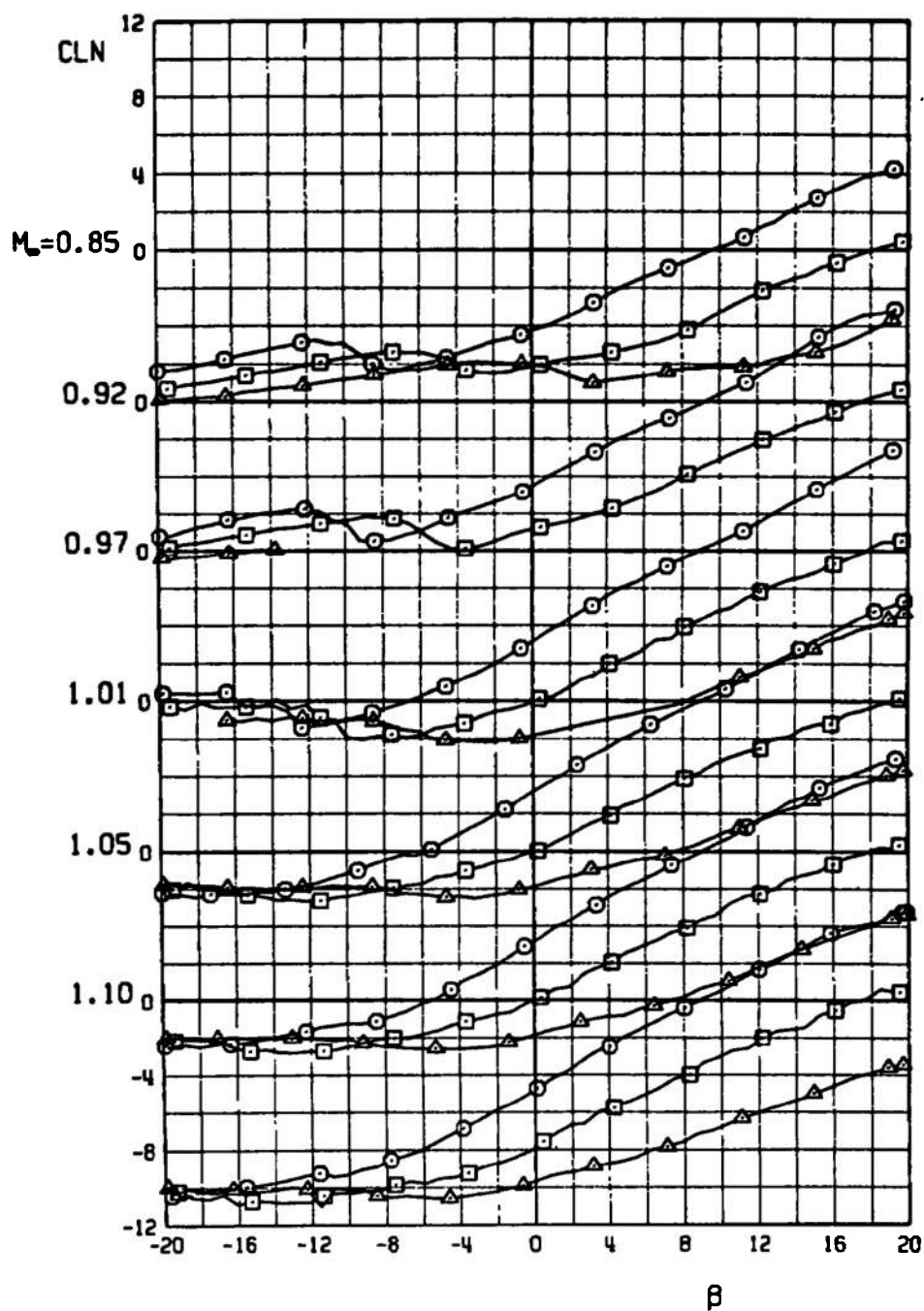
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	82WOF13	0	10	0	10	0	0
□	82WOF13	0	20	0	20	0	0
△	82WOF13	0	30	0	30	0	0



d. C_Y versus β
Figure 34. Continued.

TEST CENTER NSROC TEST 6

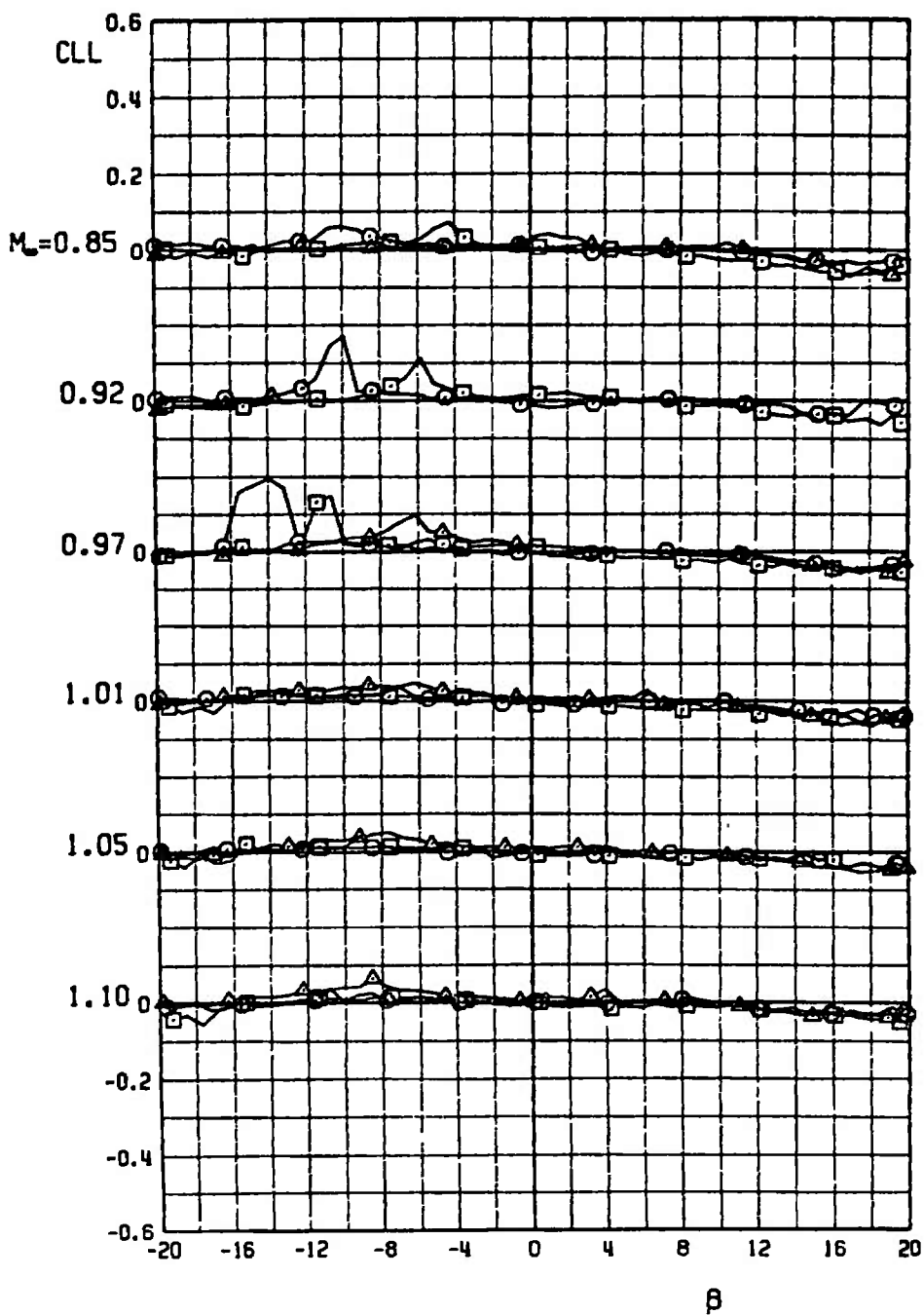
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF13	0	10	0	10	0	0
□	B2WOF13	0	20	0	20	0	0
△	B2WOF13	0	30	0	30	0	0



e. CL_N versus β
Figure 34. Continued.

TEST CENTER NSADC TEST 6

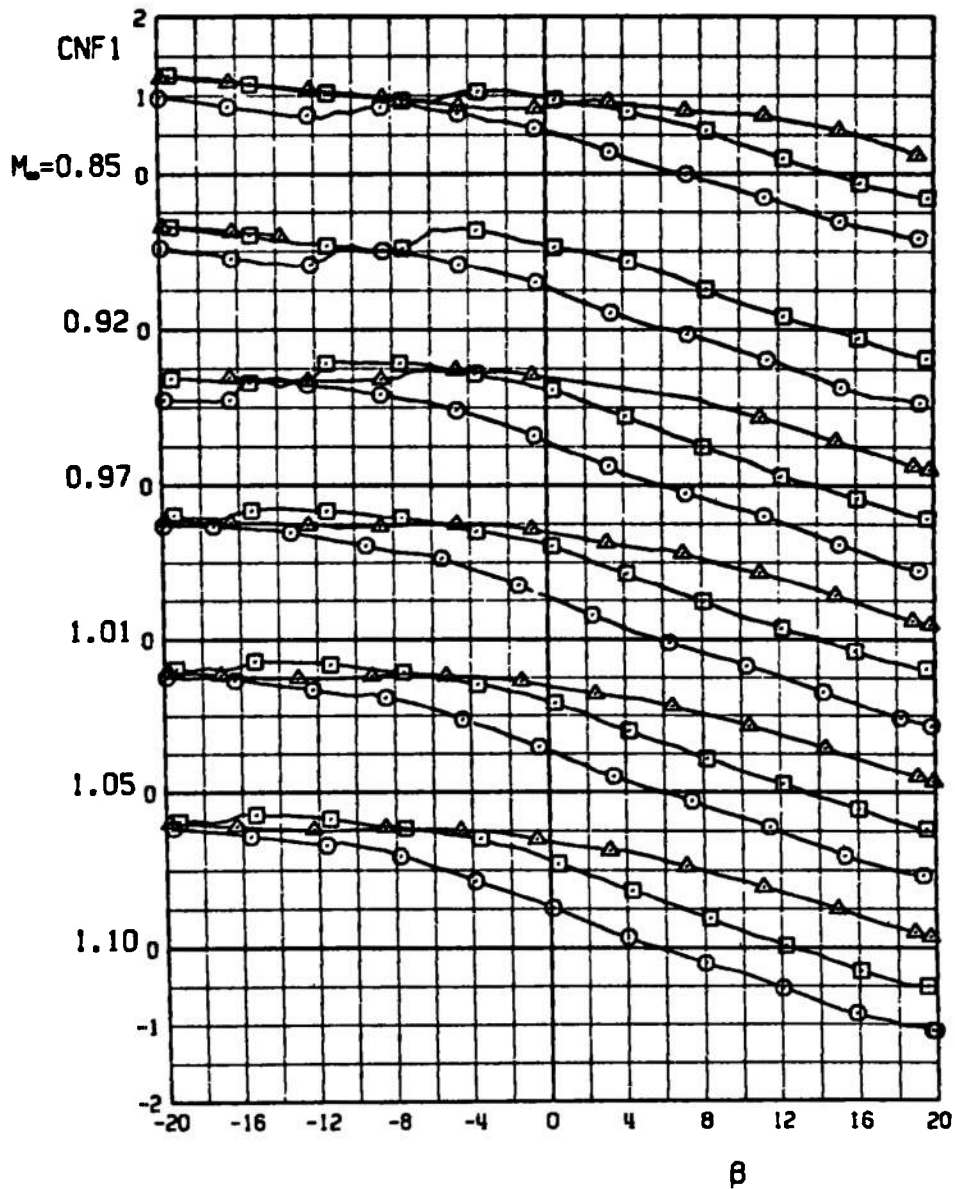
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF13	0	10	0	10	0	0
□	B2WOF13	0	20	0	20	0	0
△	B2WOF13	0	30	0	30	0	0



f. CLL versus β
Figure 34. Continued.

TEST CENTER NSRDC TEST 6

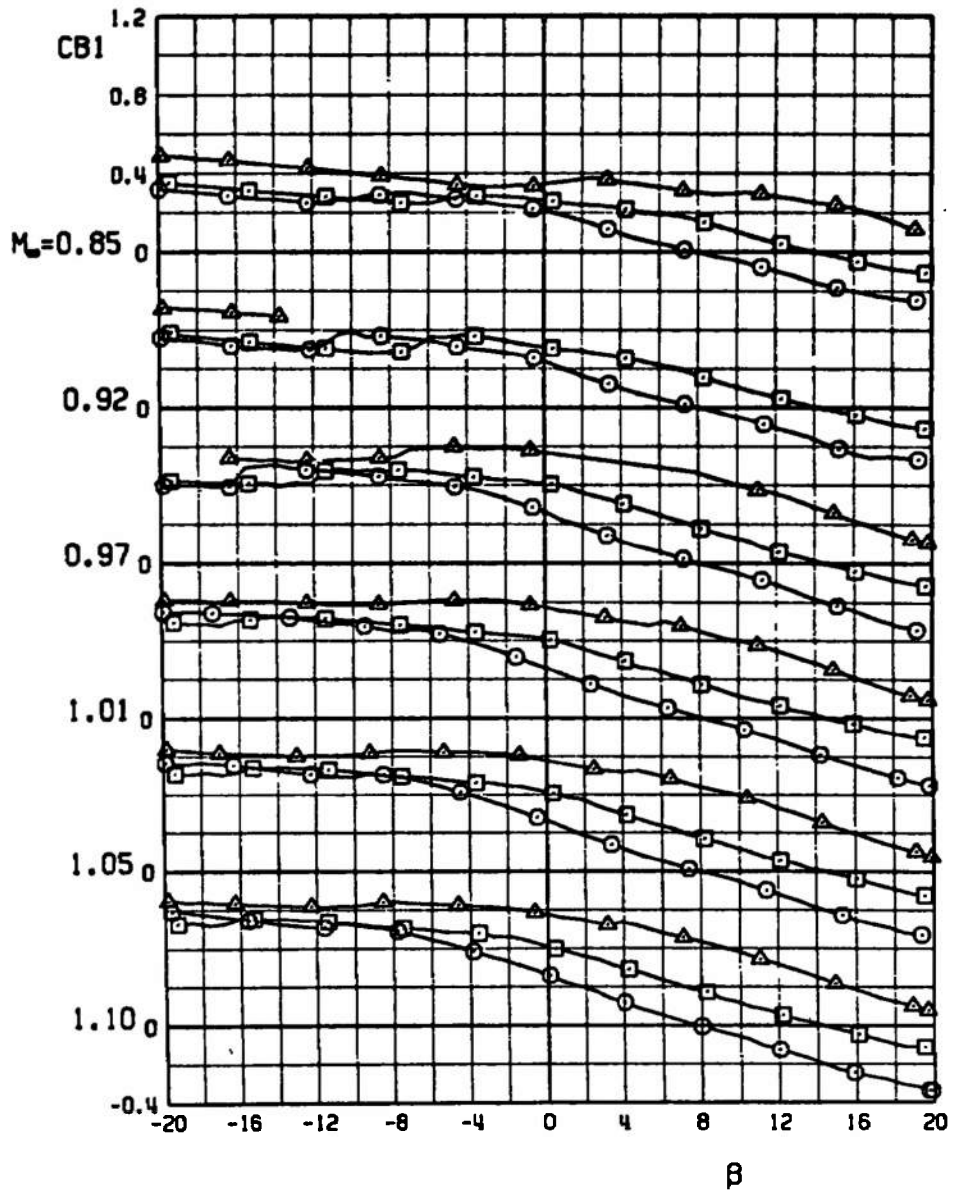
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF13	0	10	0	10	0	0
□	B2WOF13	0	20	0	20	0	0
△	B2WOF13	0	30	0	30	0	0



g. CNF1 versus β
Figure 34. Continued.

TEST CENTER NSRDC TEST 6

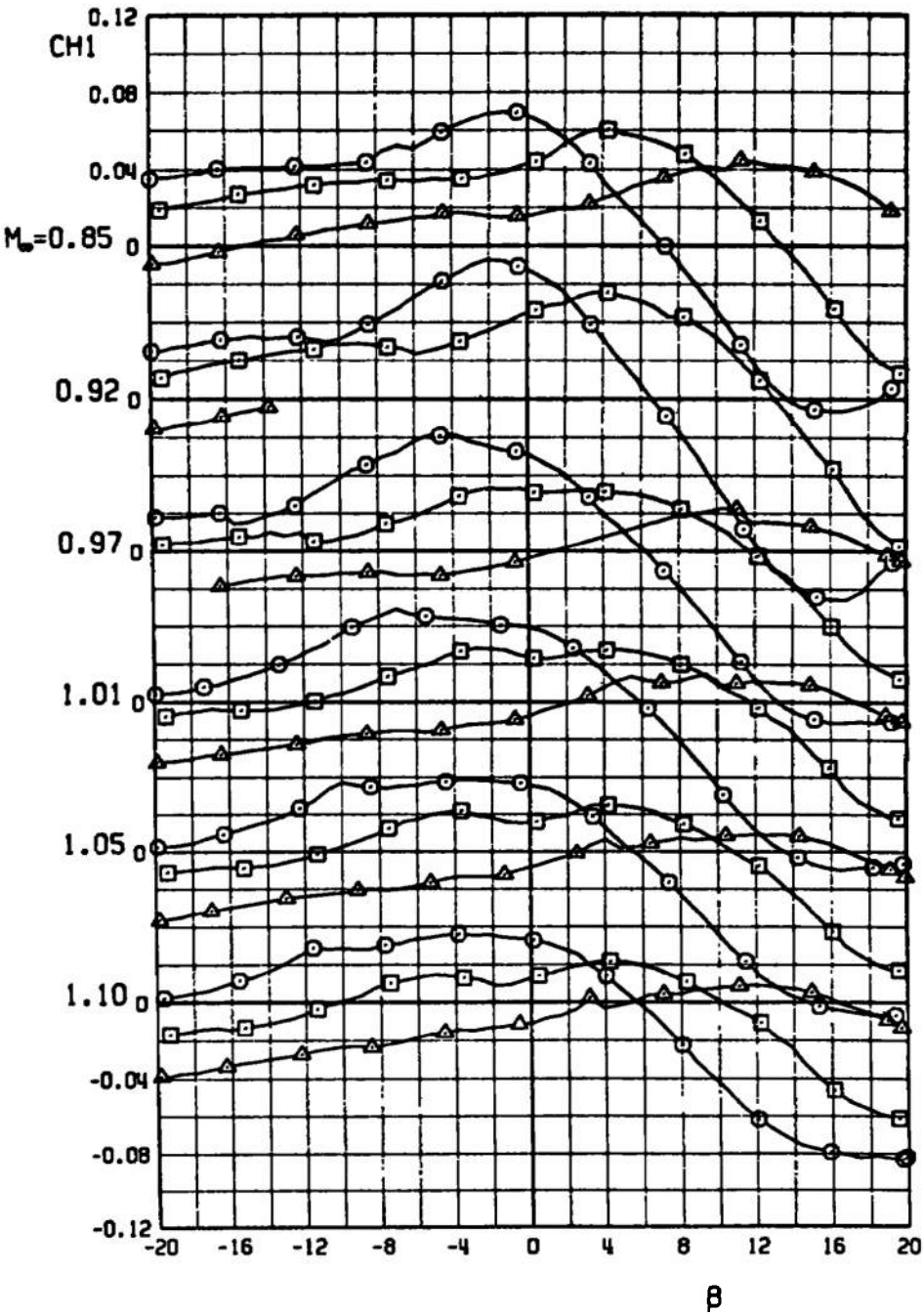
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	82WOF13	0	10	0	10	0	0
□	82WOF13	0	20	0	20	0	0
△	82WOF13	0	30	0	30	0	0



h. CB1 versus β
Figure 34. Continued.

TEST CENTER NSRDC TEST 6

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF13	0	10	0	10	0	0
□	B2WOF13	0	20	0	20	0	0
△	B2WOF13	0	30	0	30	0	0



i. CH1 versus β
Figure 34. Concluded.

TEST CENTER NSRDC TEST 6

	CONF-	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W0F16	0	10	0	10	0	0
□	B2W0F16	0	20	0	20	0	0
▲	B2W0F16	0	30	0	30	0	0

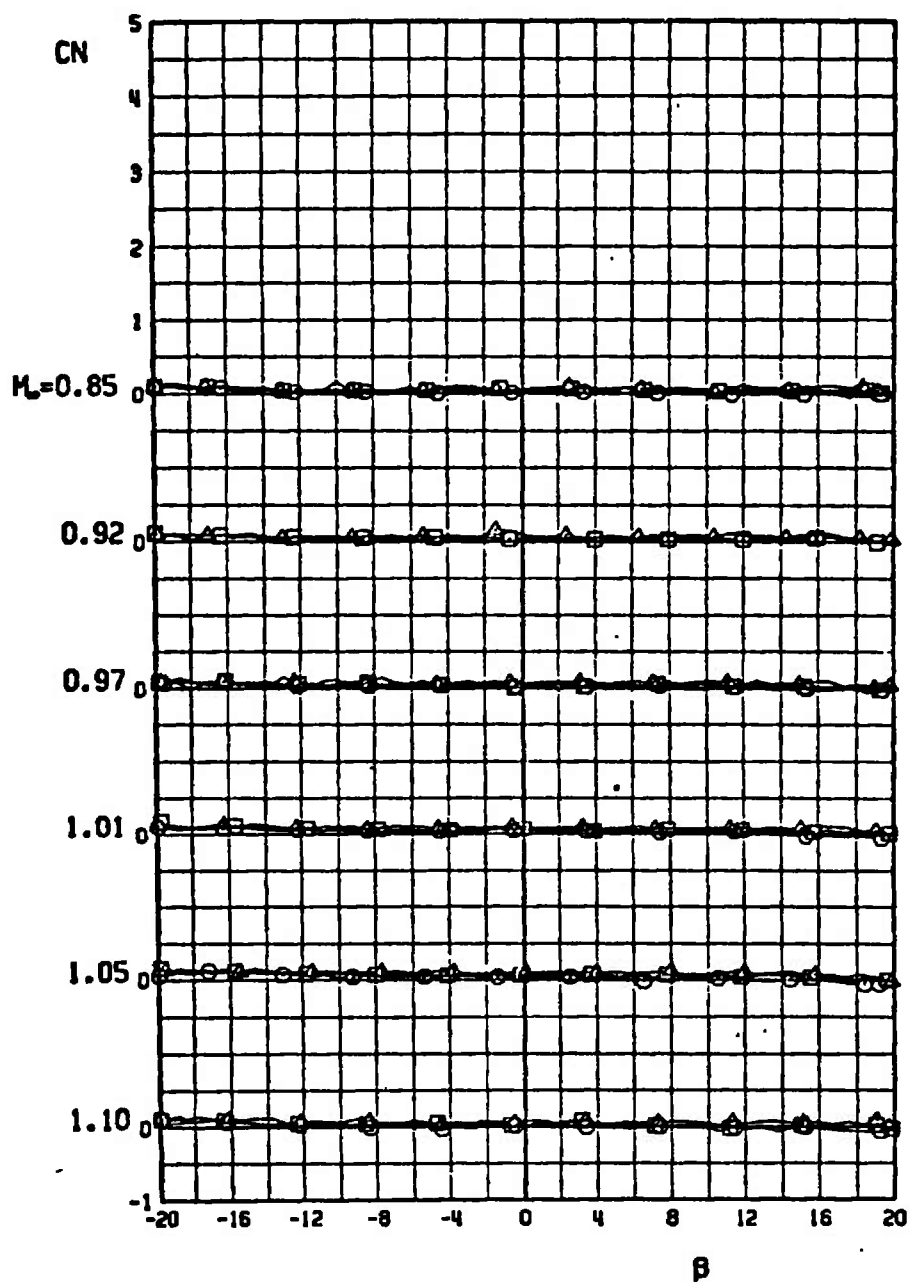
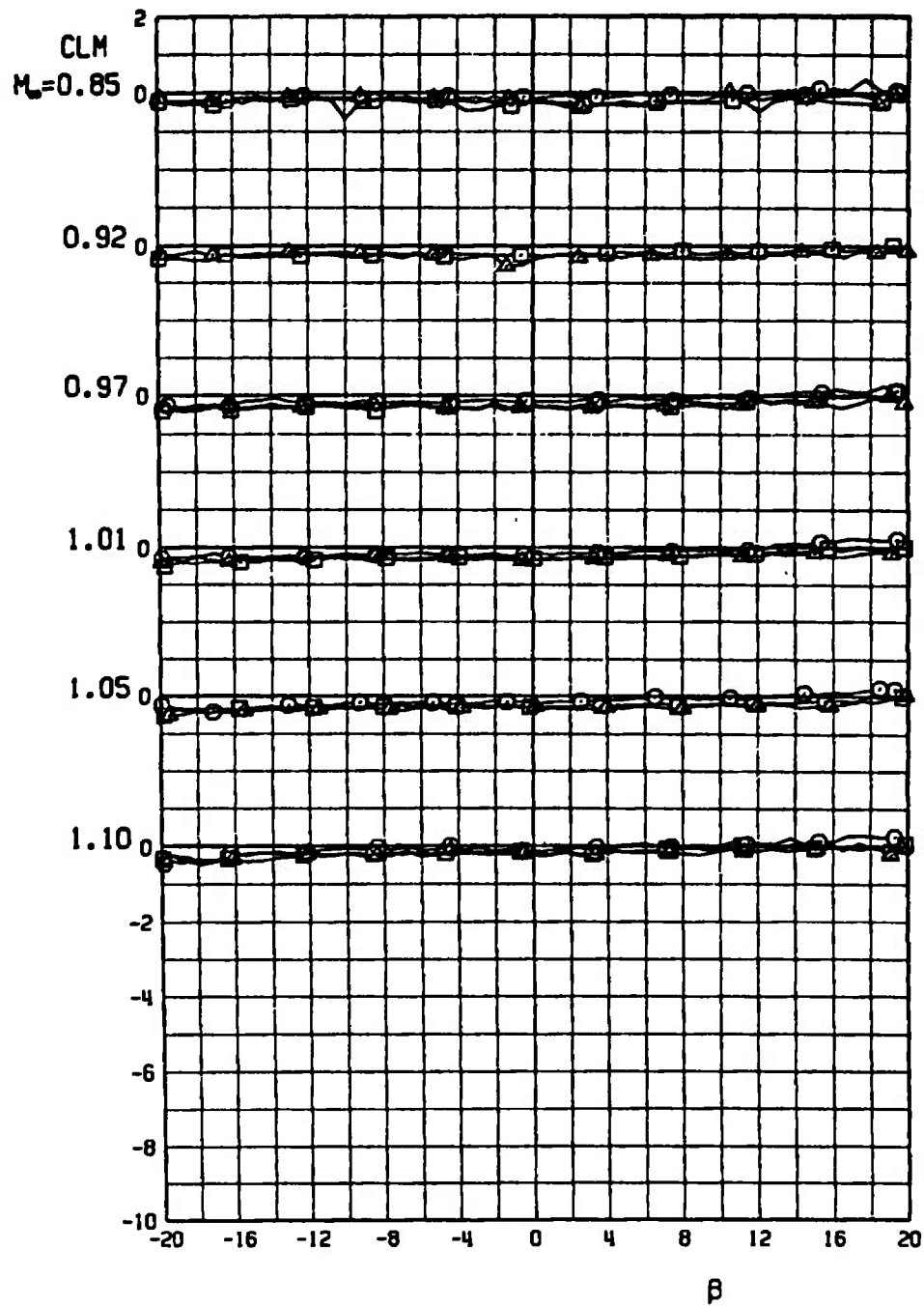
a. C_N versus β

Figure 35. Test No. 6, comparison of aerodynamic coefficients of configuration B2W0F16 for various deflections of tail fins No. 1 and 3.

TEST CENTER NSRDC TEST 6

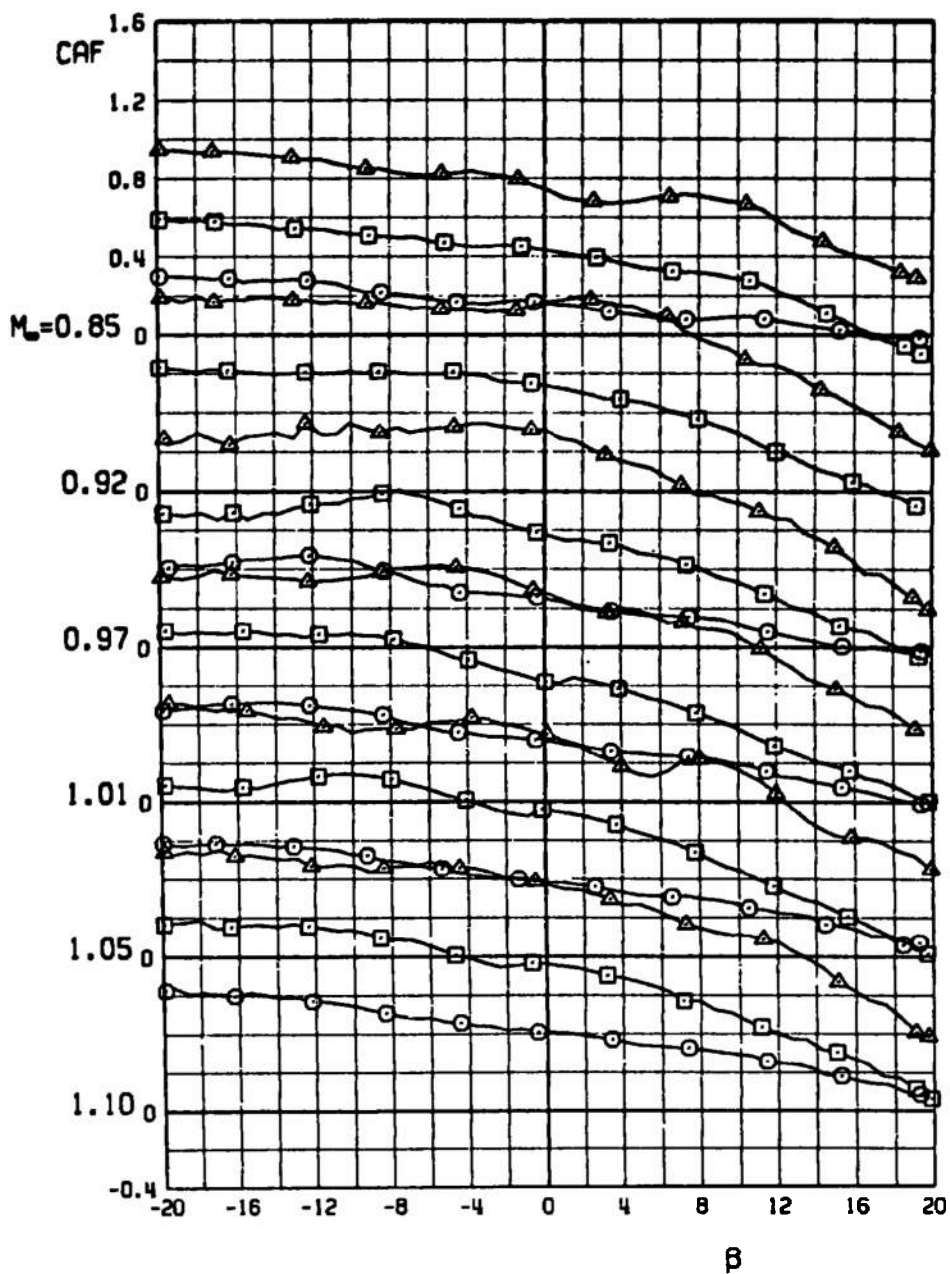
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF16	0	10	0	10	0	0
□	B2WOF16	0	20	0	20	0	0
△	B2WOF16	0	30	0	30	0	0



b. CLM versus β
Figure 35. Continued.

TEST CENTER NSADC TEST 6

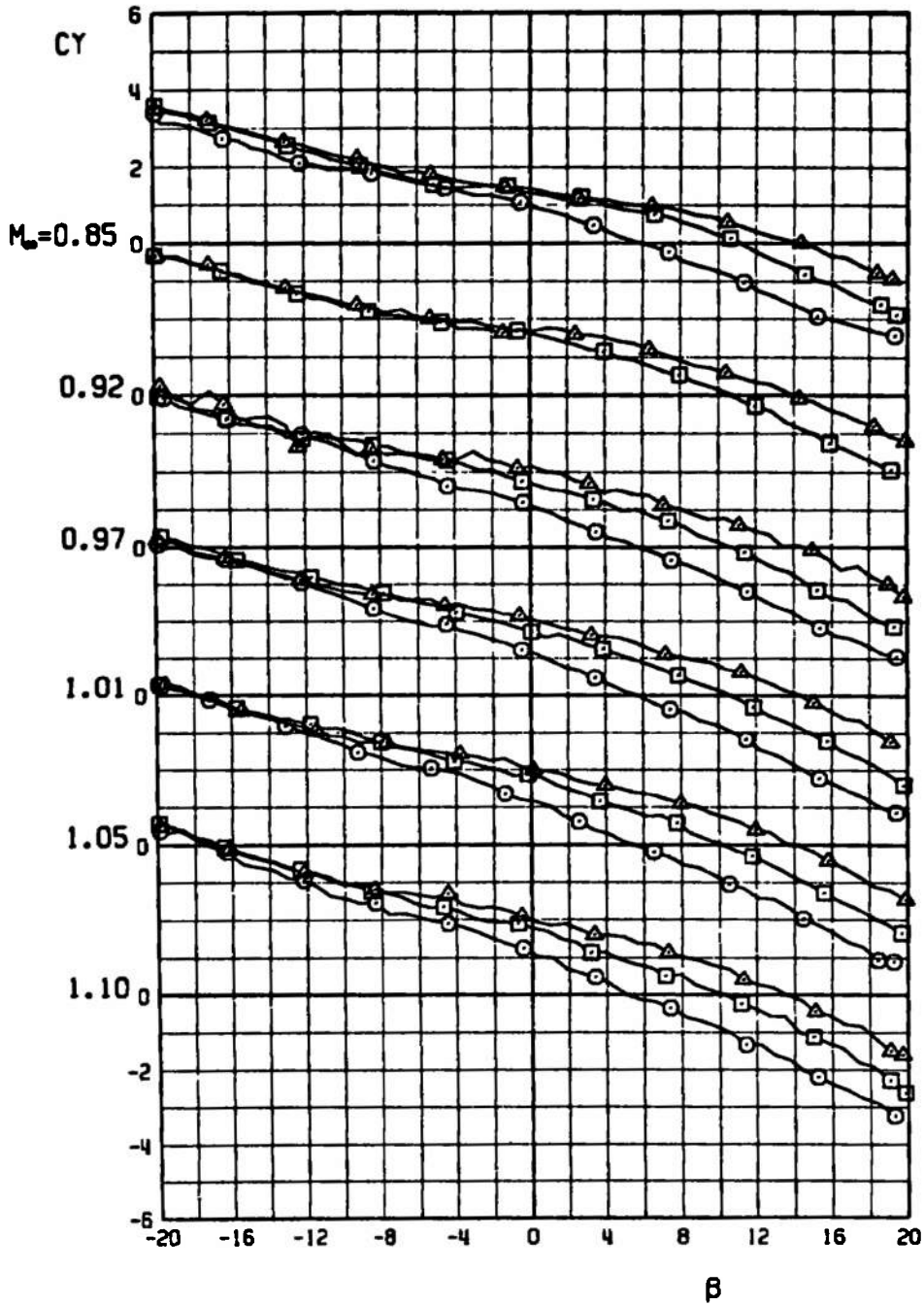
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF16	0	10	0	10	0	0
□	B2WOF16	0	20	0	20	0	0
△	B2WOF16	0	30	0	30	0	0



c. CAF versus β
Figure 35. Continued.

TEST CENTER NSRDC TEST 6

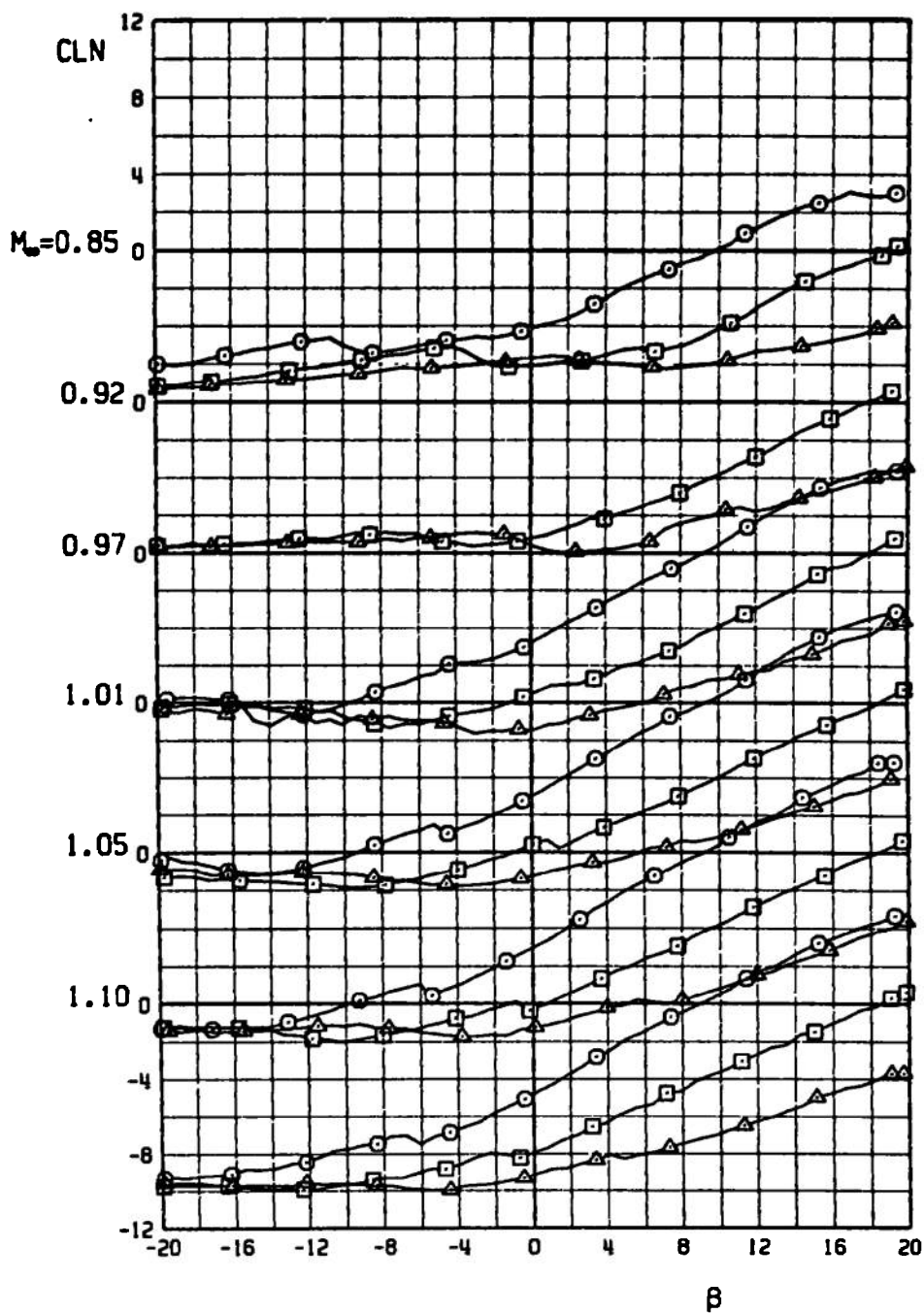
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF16	0	10	0	10	0	0
□	B2WOF16	0	20	0	20	0	0
△	B2WOF16	0	30	0	30	0	0



d. C_Y versus β
Figure 35. Continued.

TEST CENTER NSRDC TEST 6

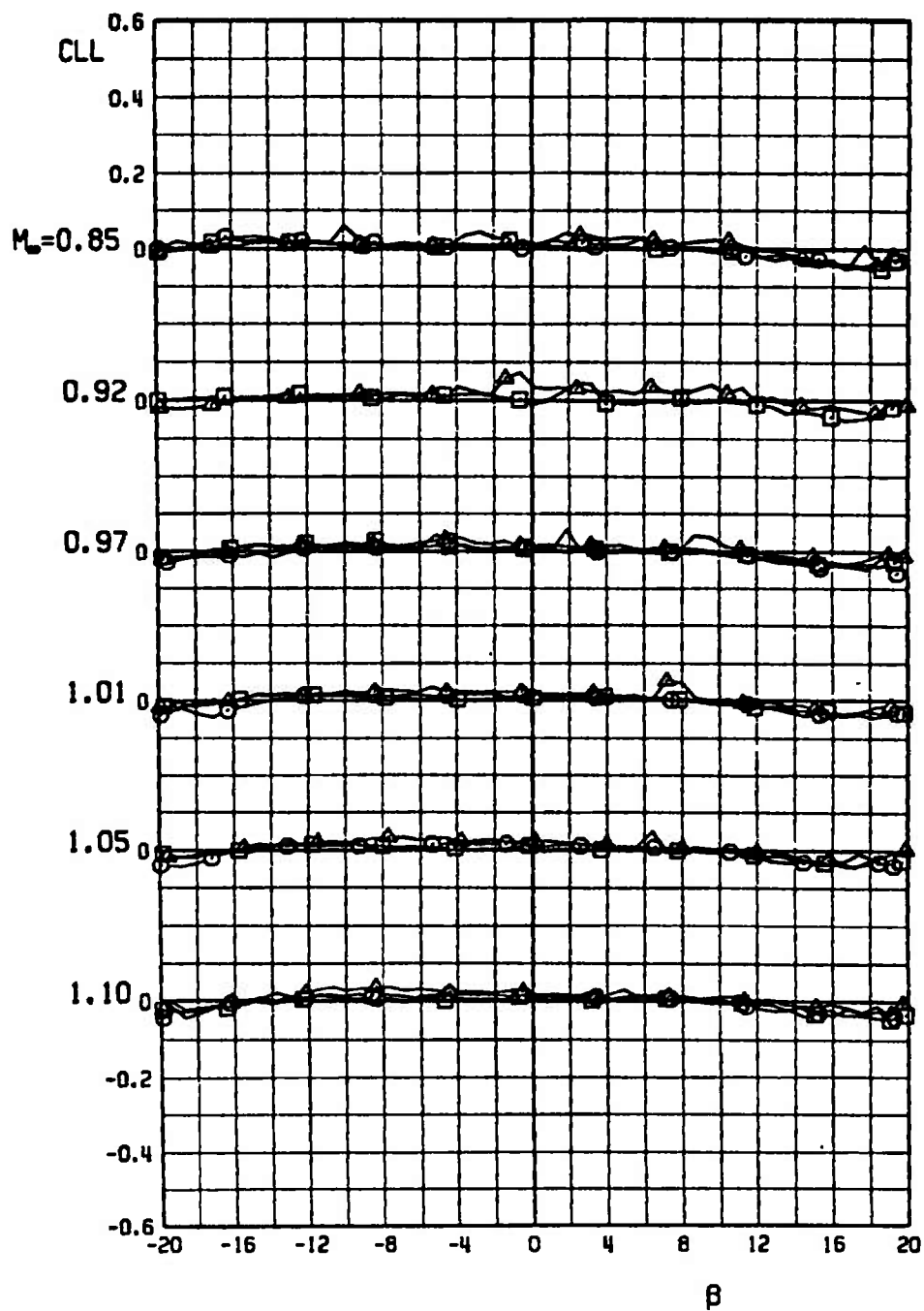
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF16	0	10	0	10	0	0
□	B2WOF16	0	20	0	20	0	0
△	B2WOF16	0	30	0	30	0	0



e. CL_N versus β
Figure 35. Continued.

TEST CENTER NSRDC TEST 6

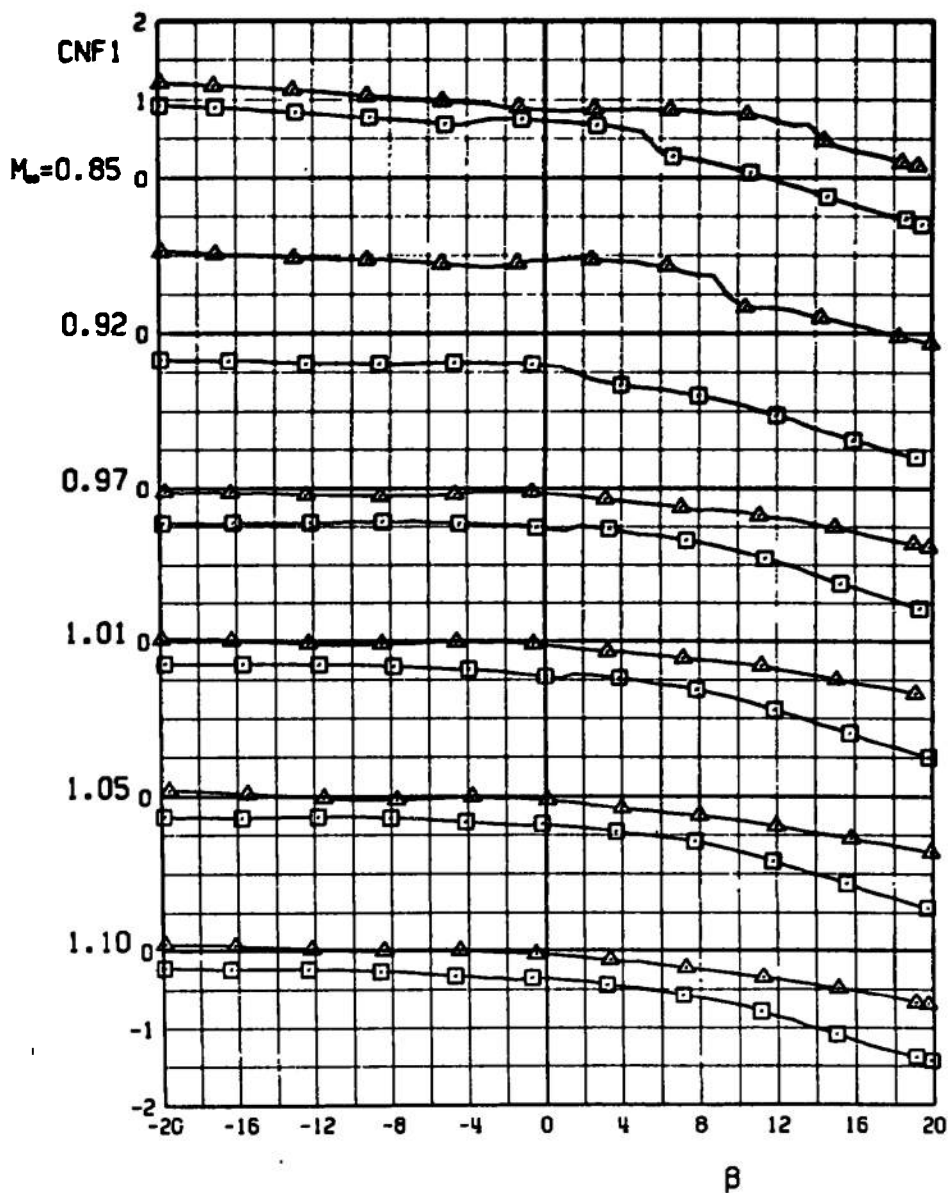
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B2WOF16	0	10	0	10	0	0
□	B2WOF16	0	20	0	20	0	0
△	B2WOF16	0	30	0	30	0	0



f. CLL versus β
Figure 35. Continued.

TEST CENTER NSRDC TEST 6

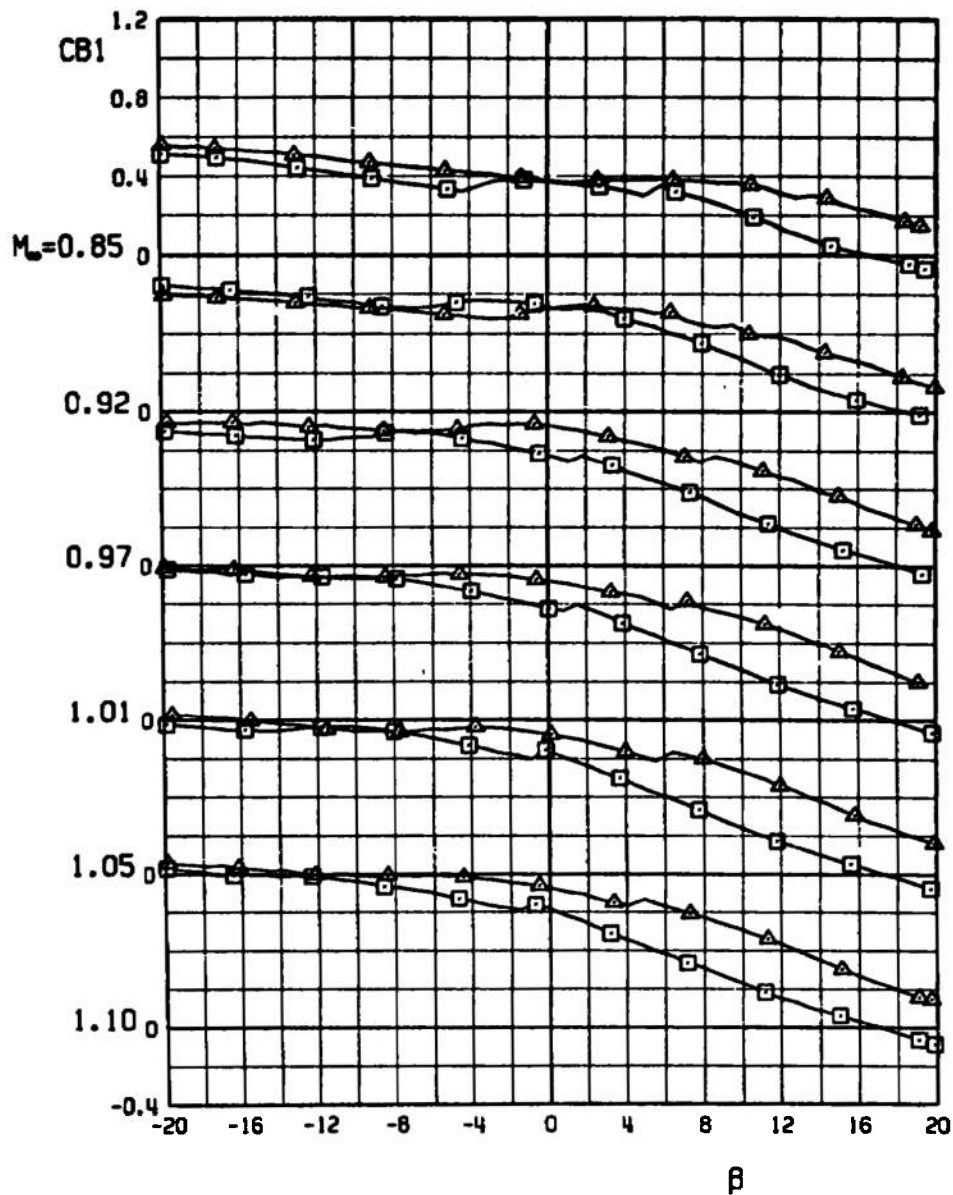
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF16	0	10	0	10	0	0
□	B2WOF16	0	20	0	20	0	0
△	B2WOF16	0	30	0	30	0	0



g. CNF1 versus β
Figure 35. Continued.

TEST CENTER NSRDC TEST 6

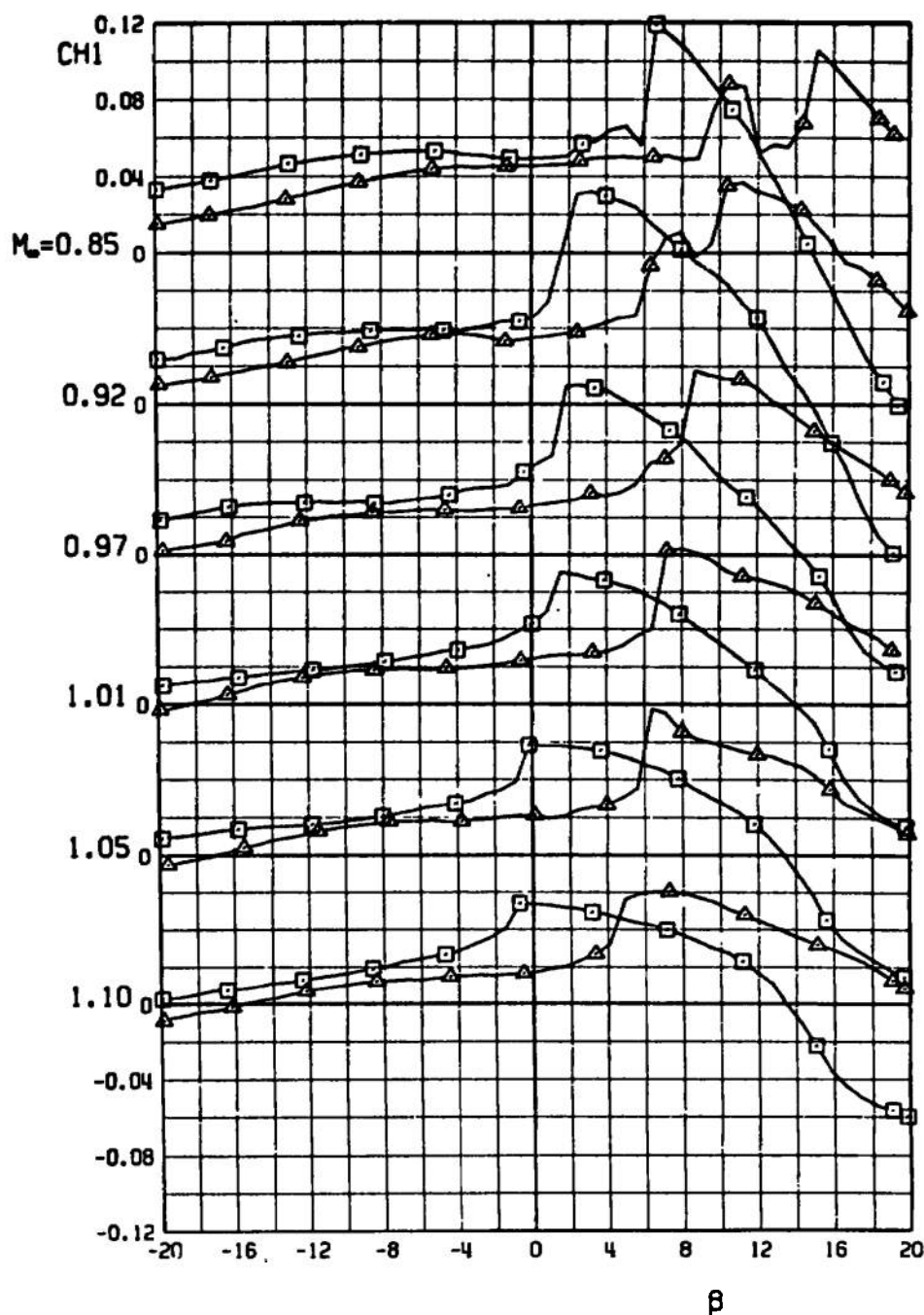
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF16	0	10	0	10	0	0
□	B2WOF16	0	20	0	20	0	0
△	B2WOF16	0	30	0	30	0	0



h. CB1 versus β
Figure 35. Continued.

TEST CENTER NSROC TEST 6

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2WOF16	0	10	0	10	0	0
□	B2WOF16	0	20	0	20	0	0
△	B2WOF16	0	30	0	30	0	0



i. CH1 versus β
Figure 35. Concluded.

TEST CENTER NSROC TEST 6

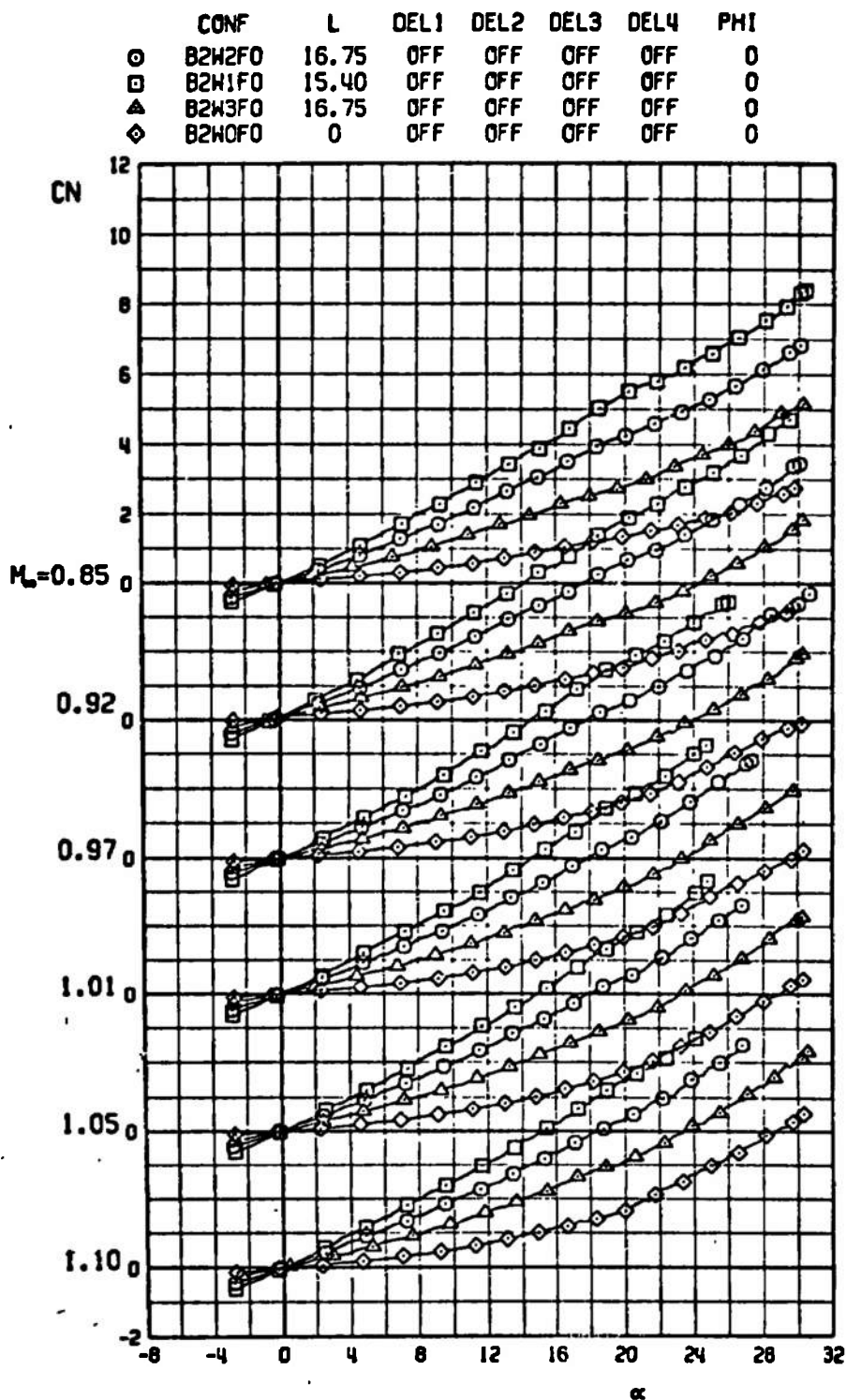
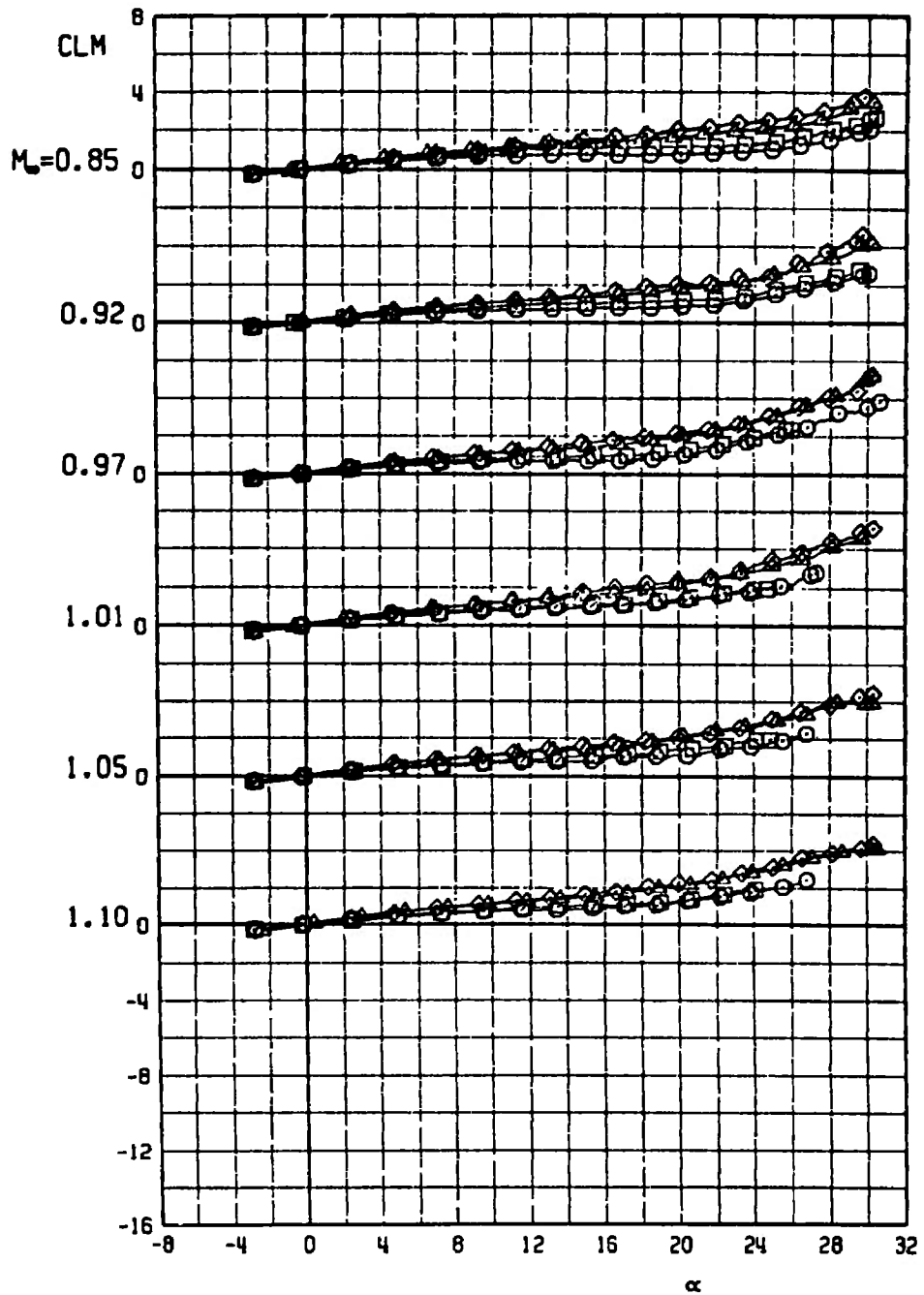


Figure 36. Test No. 6, comparison of aerodynamic coefficients of configurations B2W2F0, L = 16.75; B2W1F0, L = 15.40; B2W3F0, L = 16.75; and B2W0F0, L = 0.

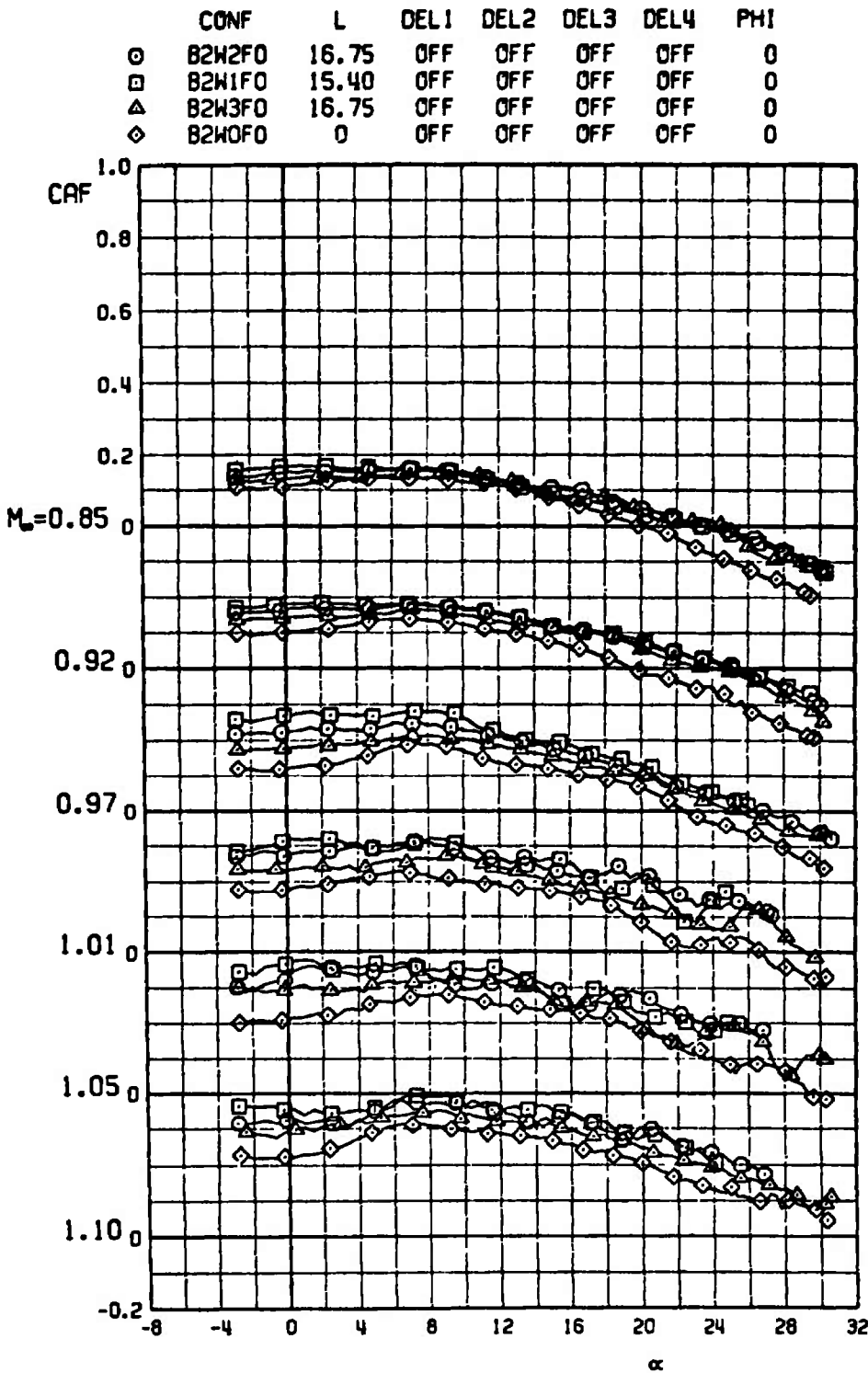
TEST CENTER NSROC TEST 6

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W2F0	16.75	OFF	OFF	OFF	OFF	0
□	B2W1F0	15.40	OFF	OFF	OFF	OFF	0
△	B2W3F0	16.75	OFF	OFF	OFF	OFF	0
◇	B2W0F0	0	OFF	OFF	OFF	OFF	0



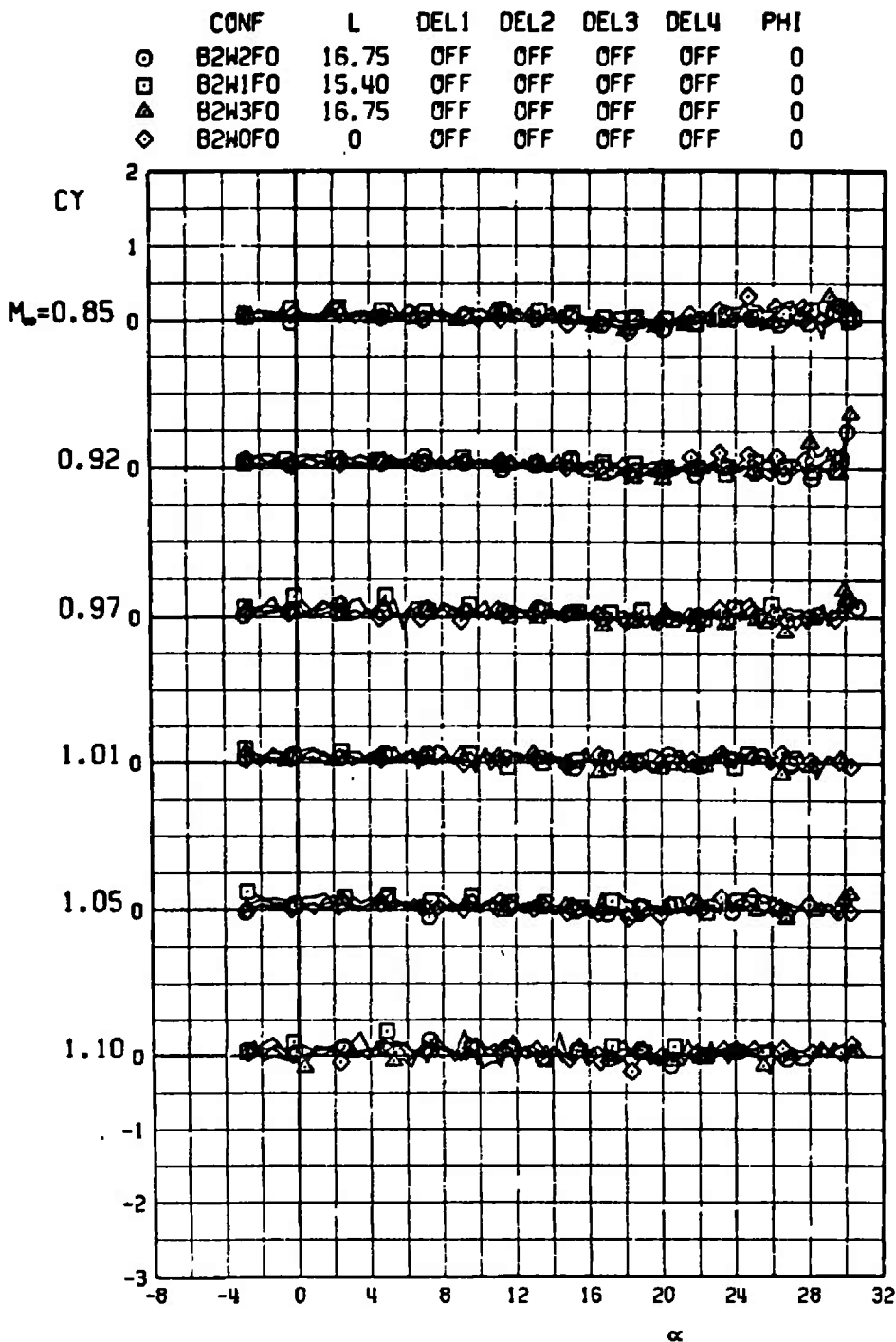
b. CLM versus α
Figure 36. Continued.

TEST CENTER NSROC TEST 6



c. CAF versus α
Figure 36. Continued.

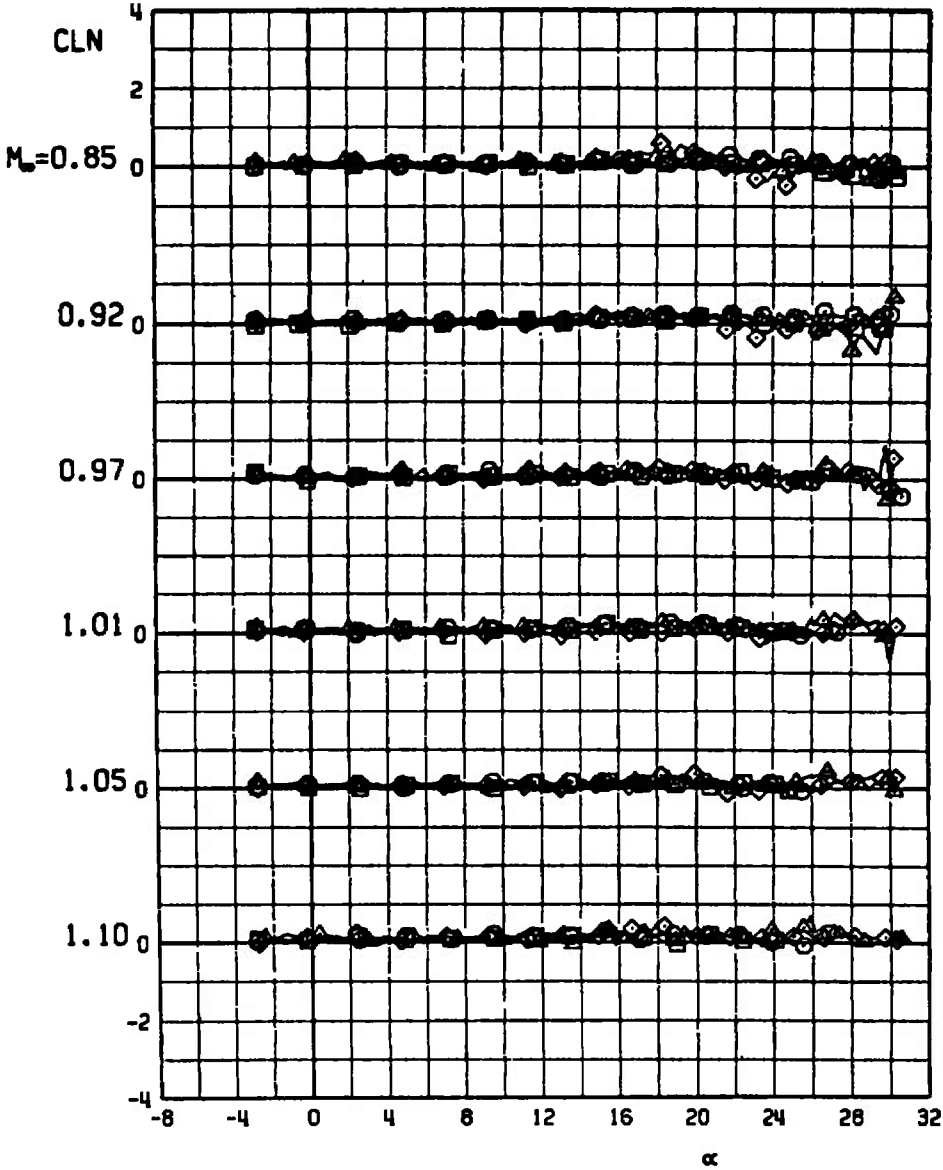
TEST CENTER NSROC TEST 6



d. CY versus α
 Figure 36. Continued.

TEST CENTER NSRDC TEST 6

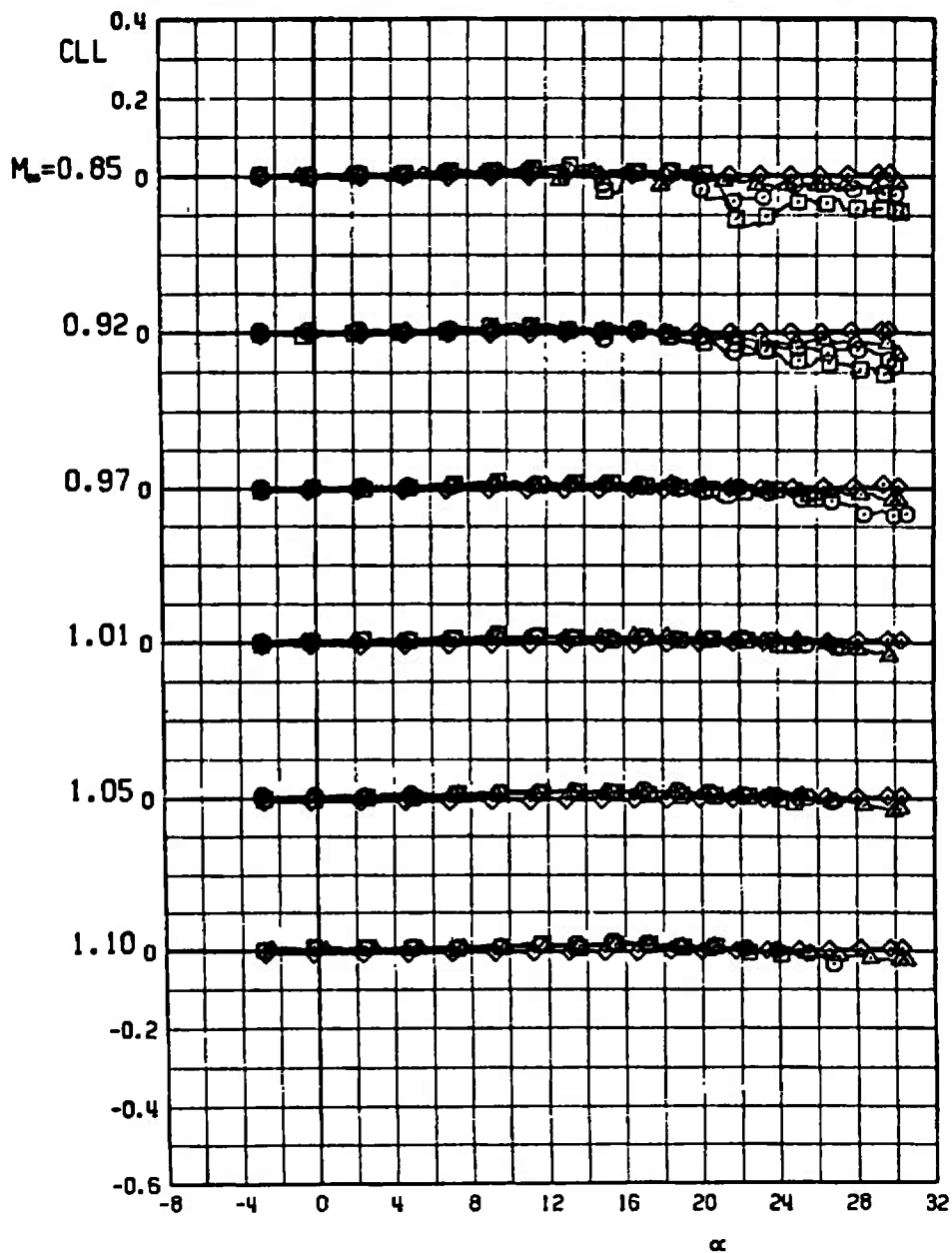
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W2F0	16.75	OFF	OFF	OFF	OFF	0
□	B2W1F0	15.40	OFF	OFF	OFF	OFF	0
△	B2W3F0	16.75	OFF	OFF	OFF	OFF	0
◇	B2W0F0	0	OFF	OFF	OFF	OFF	0



e. CL_N versus α
Figure 36. Continued.

TEST CENTER NSADC TEST 6

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W2F0	16.75	OFF	OFF	OFF	OFF	0
□	B2W1F0	15.40	OFF	OFF	OFF	OFF	0
△	B2W3F0	16.75	OFF	OFF	OFF	OFF	0
◇	B2W0F0	0	OFF	OFF	OFF	OFF	0



f. CLL versus α
Figure 36. Concluded.

TEST CENTER NSROC TEST 6

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W3F12	16.75	0	0	0	0	0
□	B2W2F12	16.75	0	0	0	0	0
△	B2W1F12	15.40	0	0	0	0	0

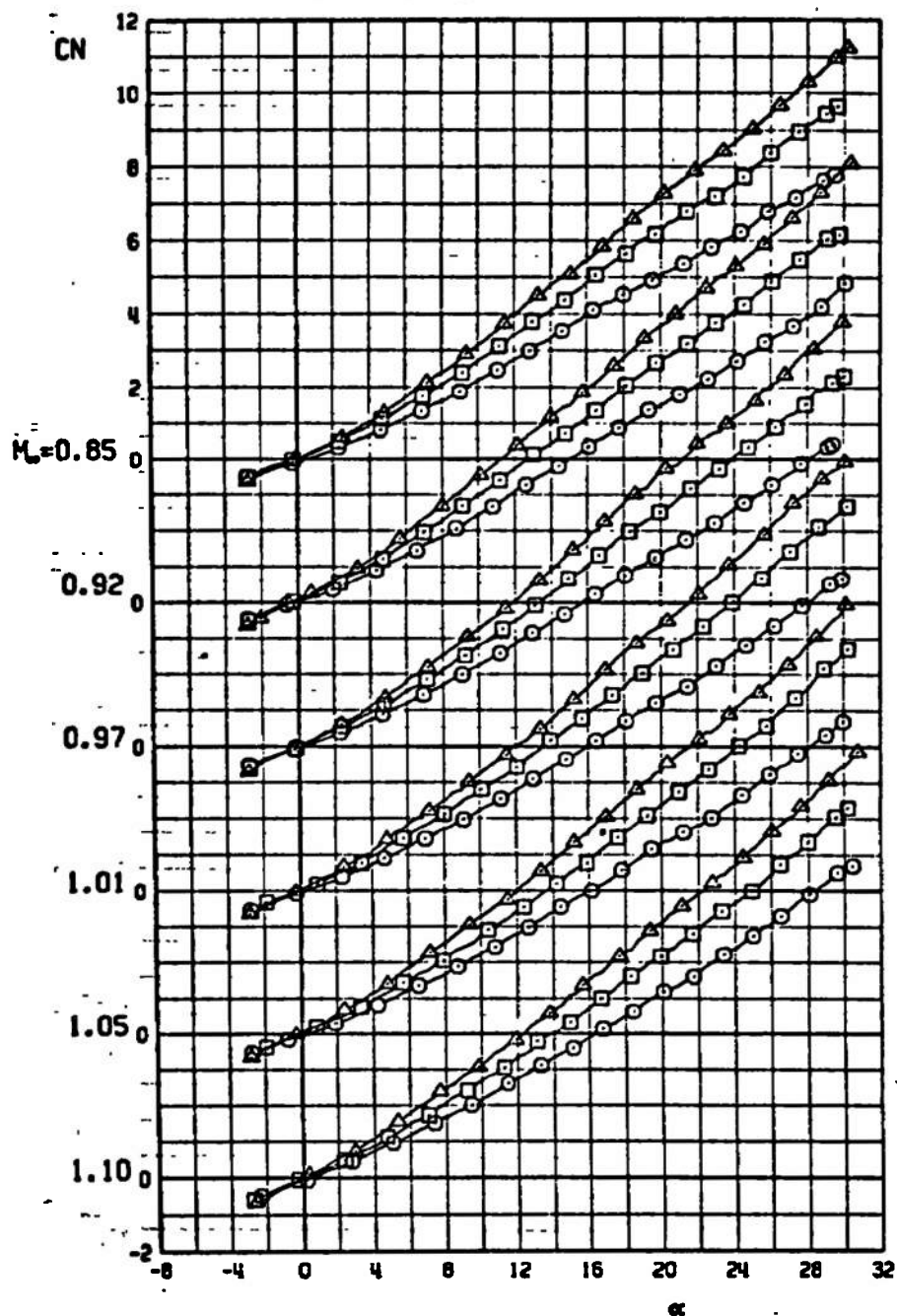
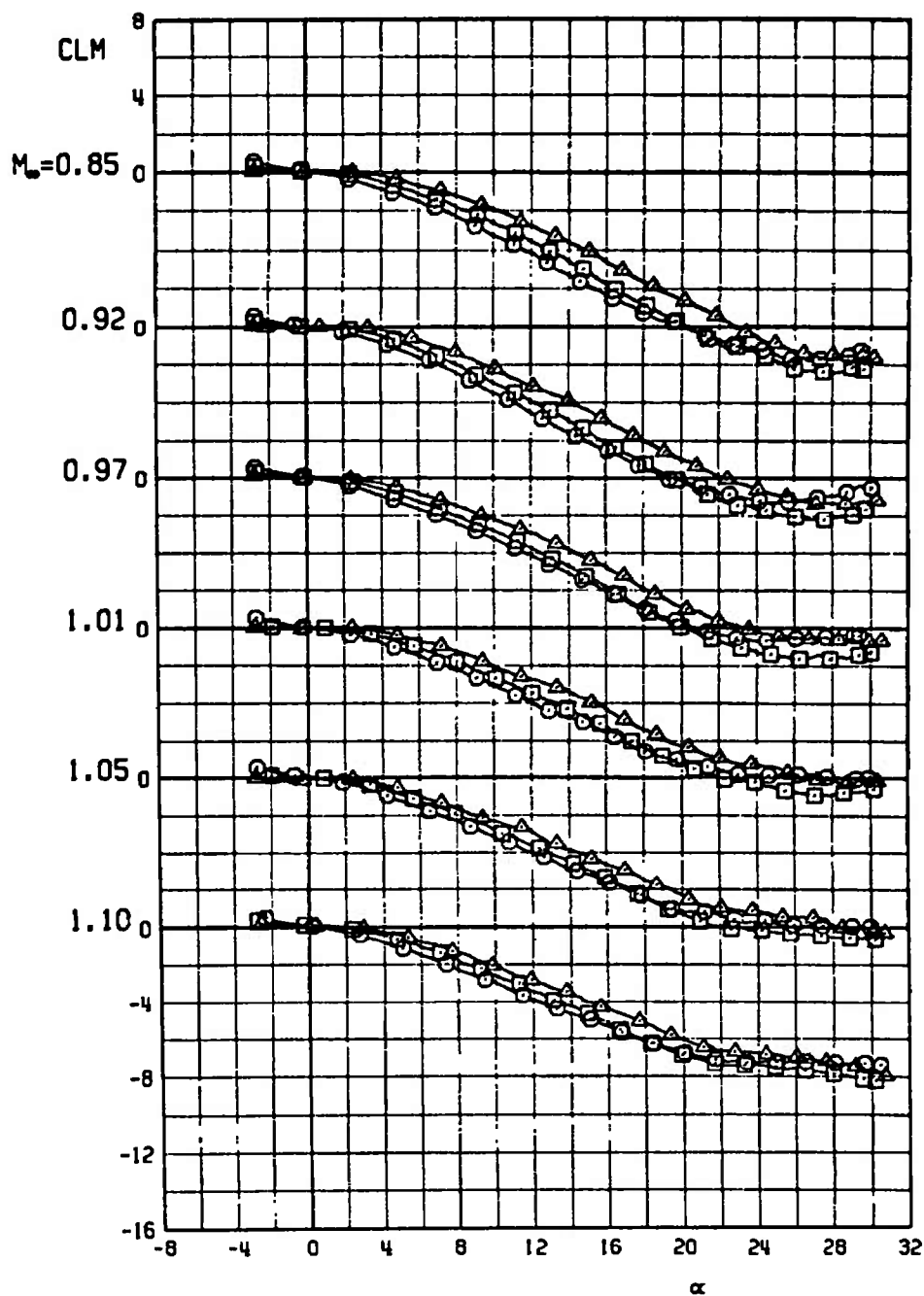
a. CN versus α

Figure 37. Test No. 6, comparison of aerodynamic coefficients of configurations B2W3F12, $L = 16.75$; B2W2F12, $L = 16.75$; and B2W1F12, $L = 15.40$.

TEST CENTER NSRDC TEST 6

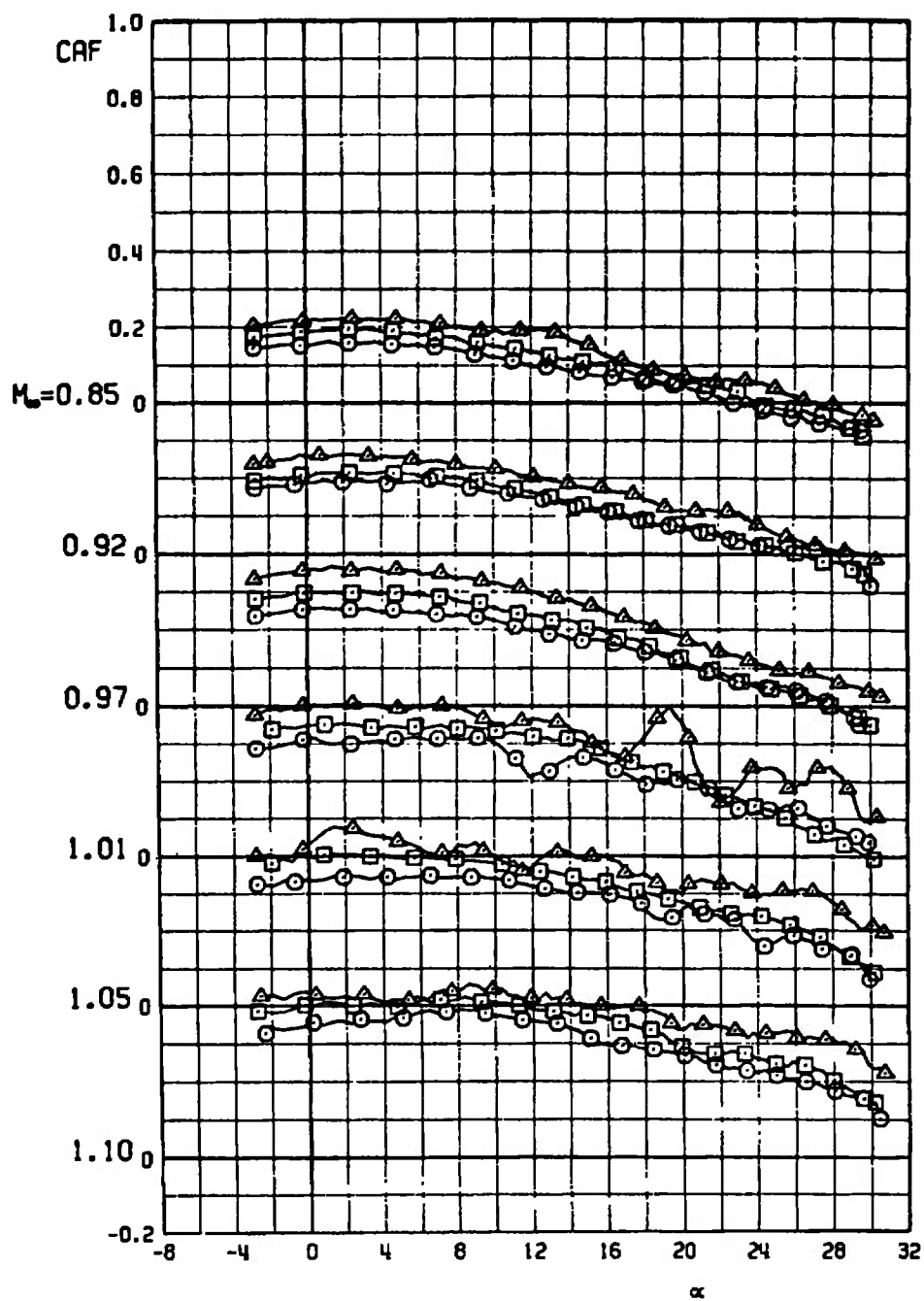
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W3F12	16.75	0	0	0	0	0
□	B2W2F12	16.75	0	0	0	0	0
△	B2W1F12	15.40	0	0	0	0	0



b. CL_M versus α
Figure 37. Continued.

TEST CENTER NSROC TEST 6

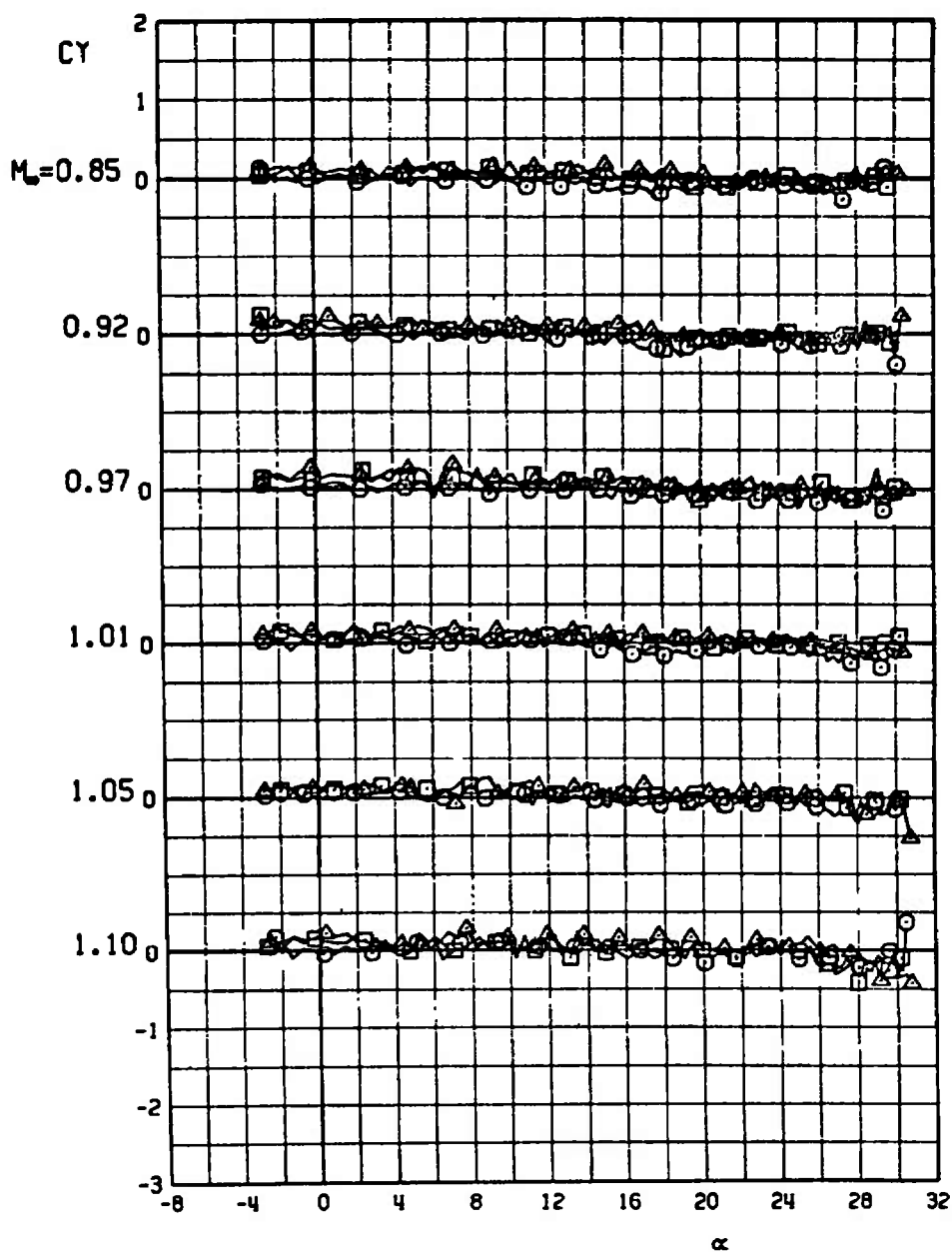
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W3F12	16.75	0	0	0	0	0
□	B2W2F12	16.75	0	0	0	0	0
△	B2W1F12	15.40	0	0	0	0	0



c. CAF versus α
Figure 37. Continued.

TEST CENTER NSRDC TEST 6

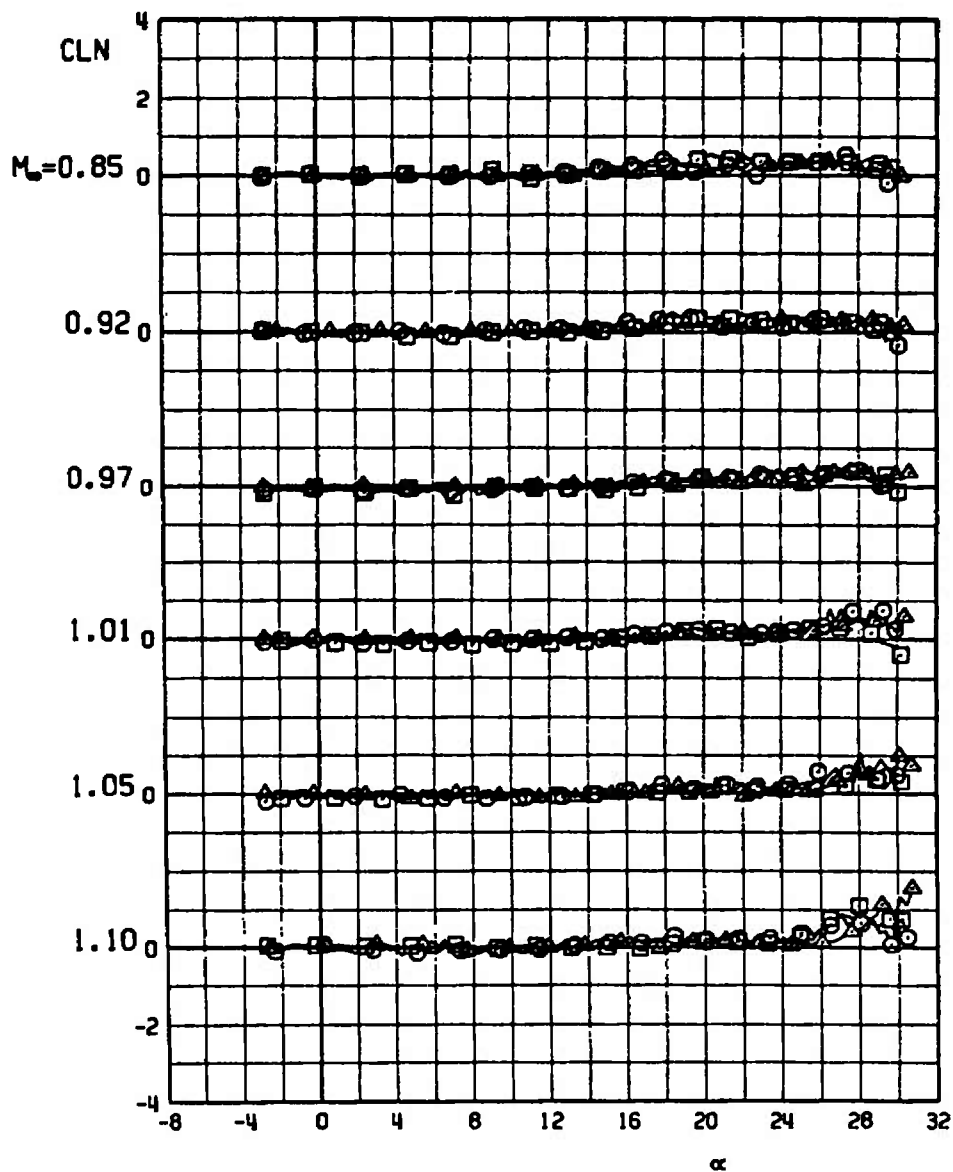
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W3F12	16.75	0	0	0	0	0
□	B2W2F12	16.75	0	0	0	0	0
△	B2W1F12	15.40	0	0	0	0	0



d. CY versus α
Figure 37. Continued.

TEST CENTER NSRDC TEST 6

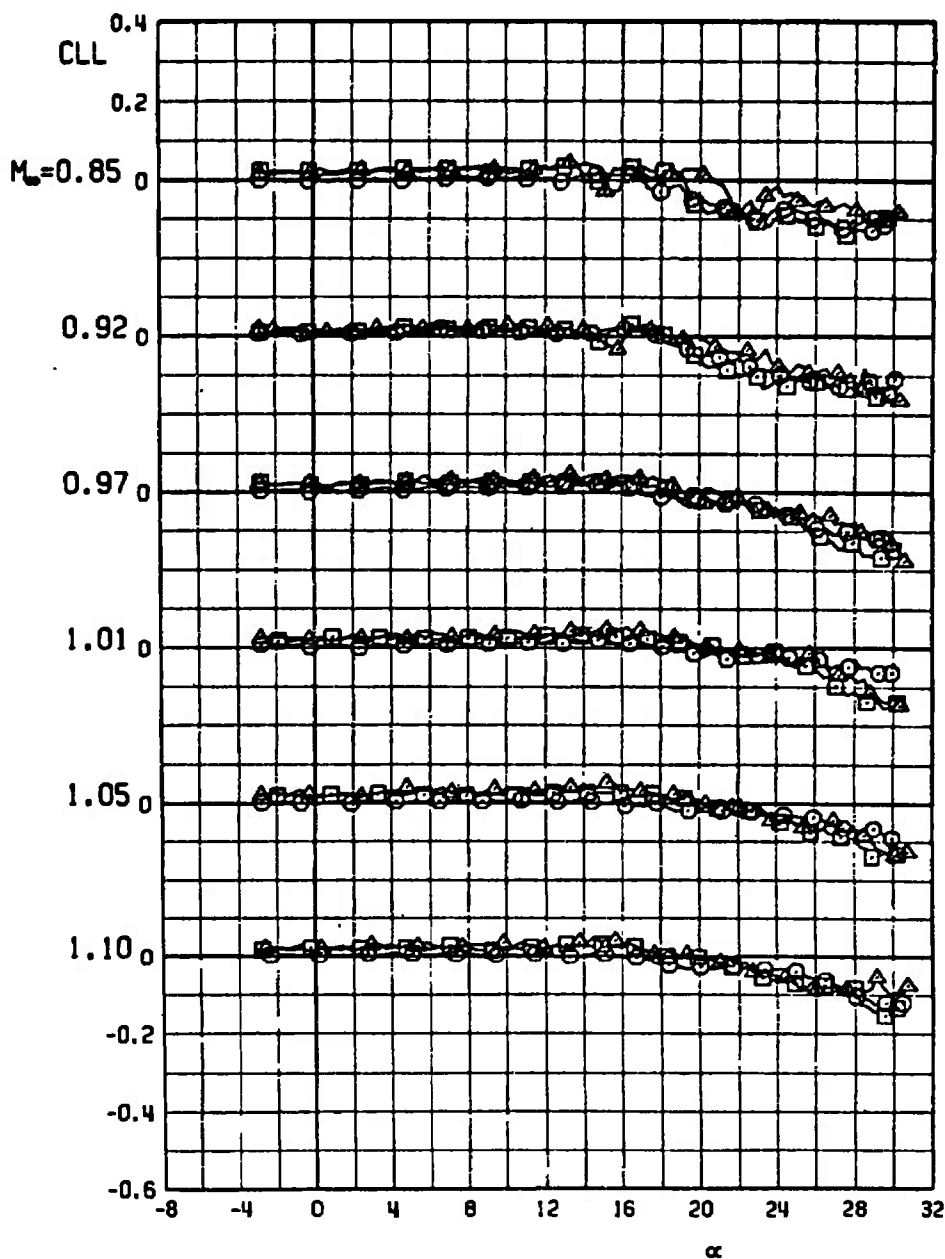
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W3F12	16.75	0	0	0	0	0
□	B2W2F12	16.75	0	0	0	0	0
△	B2W1F12	15.40	0	0	0	0	0



e. CL_N versus α
Figure 37. Continued.

TEST CENTER NSRDC TEST 6

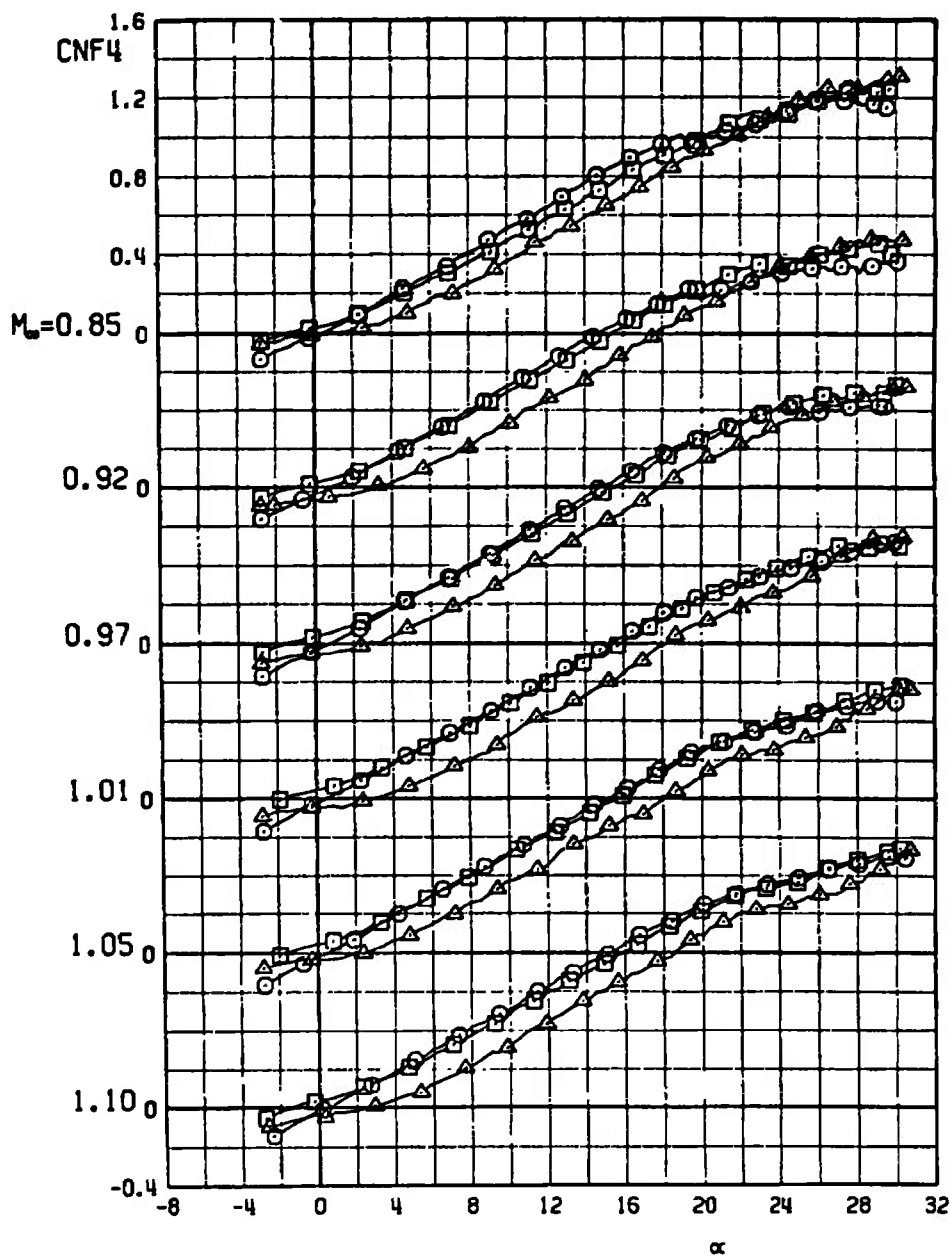
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W3F12	16.75	0	0	0	0	0
□	B2W2F12	16.75	0	0	0	0	0
△	B2W1F12	15.40	0	0	0	0	0



f. CLL versus α
Figure 37. Continued.

TEST CENTER NSROC TEST 6

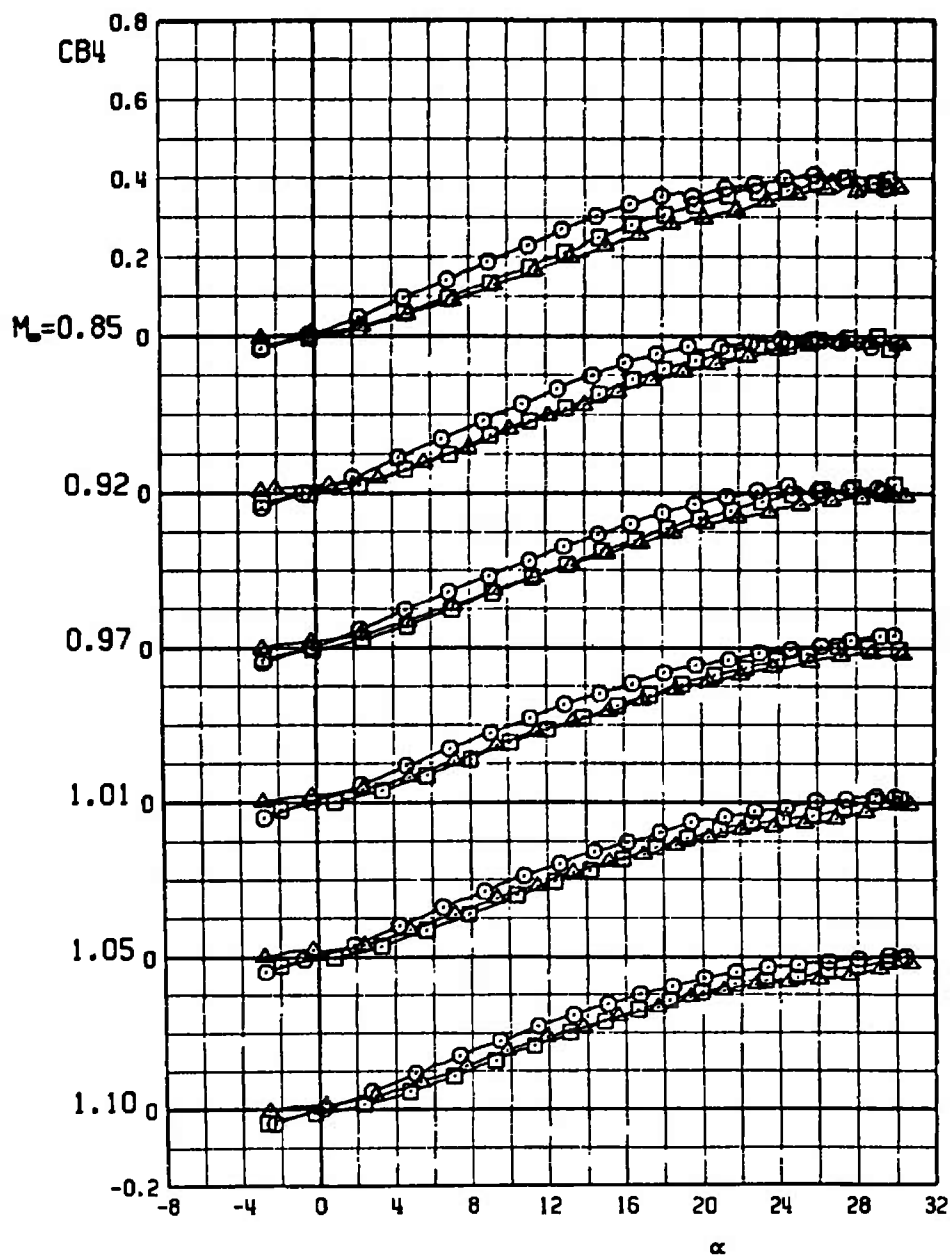
	CONF	L	DEL1	DEL2	DEL3	DEL4	PH1
○	B2W3F12	16.75	0	0	0	0	0
□	B2W2F12	16.75	0	0	0	0	0
△	B2W1F12	15.40	0	0	0	0	0



g. CNF4 versus α
Figure 37. Continued.

TEST CENTER NSRDC TEST 6

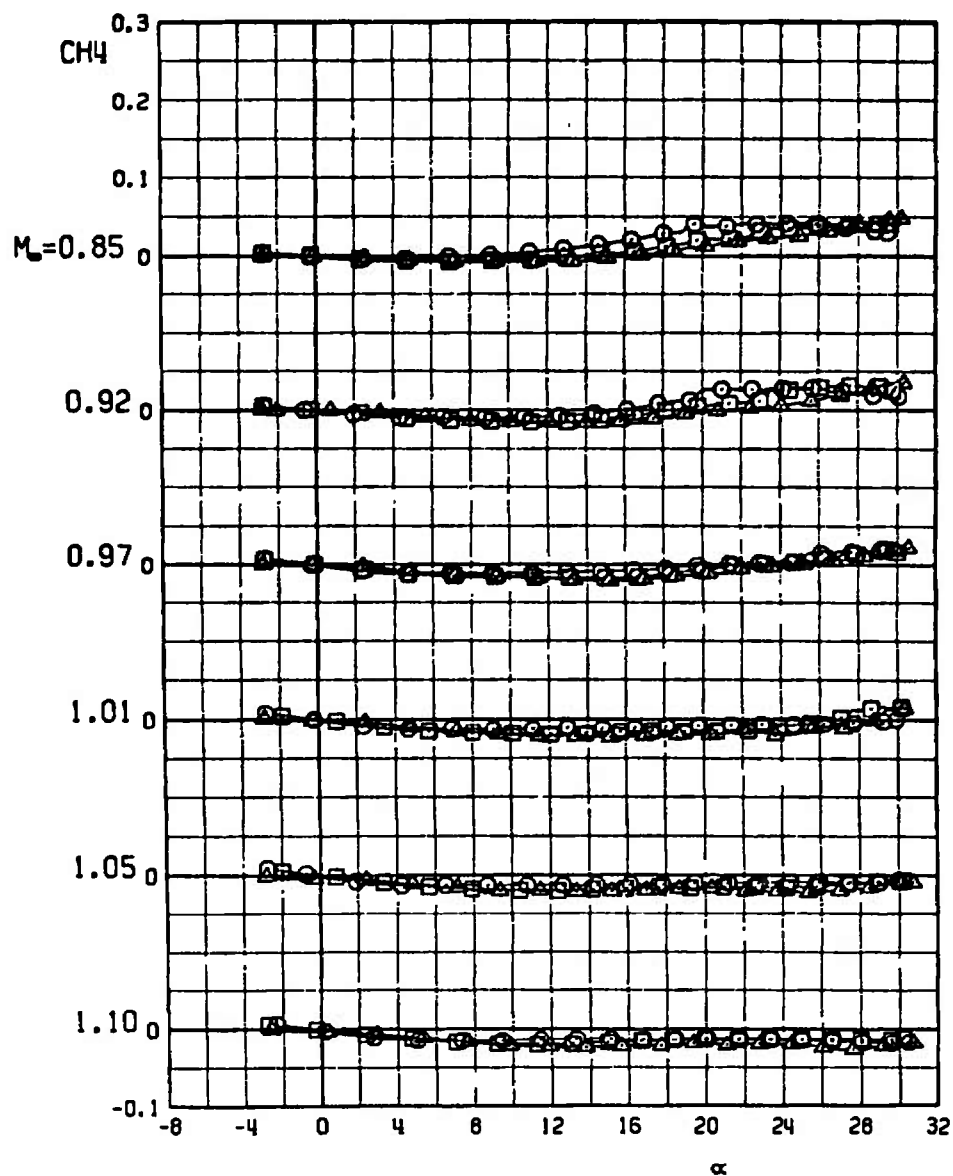
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B2W3F12	16.75	0	0	0	0	0
□	B2W2F12	16.75	0	0	0	0	0
△	B2W1F12	15.40	0	0	0	0	0



h. CB4 versus α
Figure 37. Continued.

TEST CENTER NSRDC TEST 6

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	82W3F12	16.75	0	0	0	0	0
□	82W2F12	16.75	0	0	0	0	0
△	82W1F12	15.40	0	0	0	0	0



i. CH_4 versus α
Figure 37. Concluded.

TEST CENTER NSRDC TEST 6

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	α
○	B2WOF12	0	0	0	0	0	0	0
□	B2WOF12	0	0	0	0	0	0	6
△	B2WOF12	0	0	0	0	0	0	12
◇	B2WOF12	0	0	0	0	0	0	18

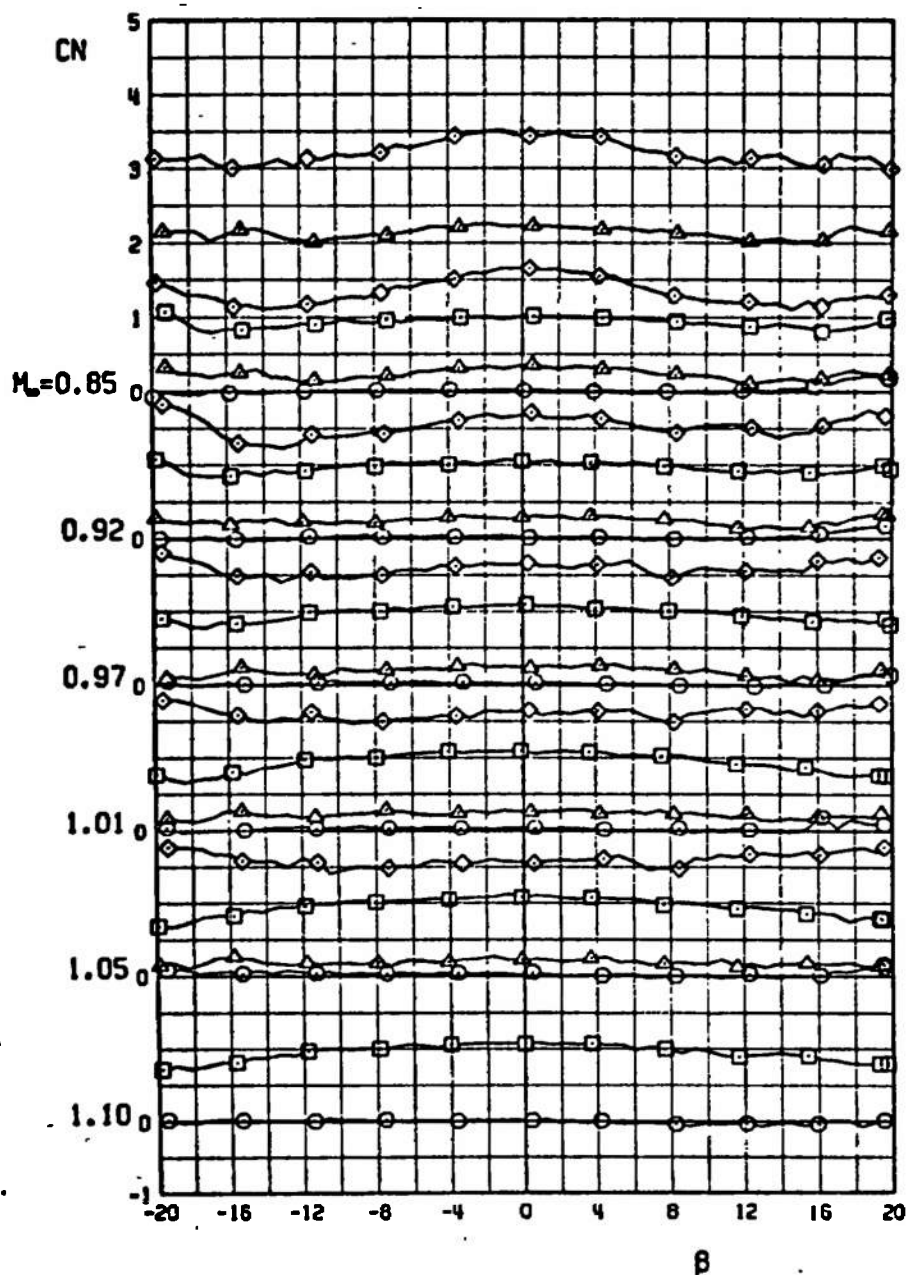
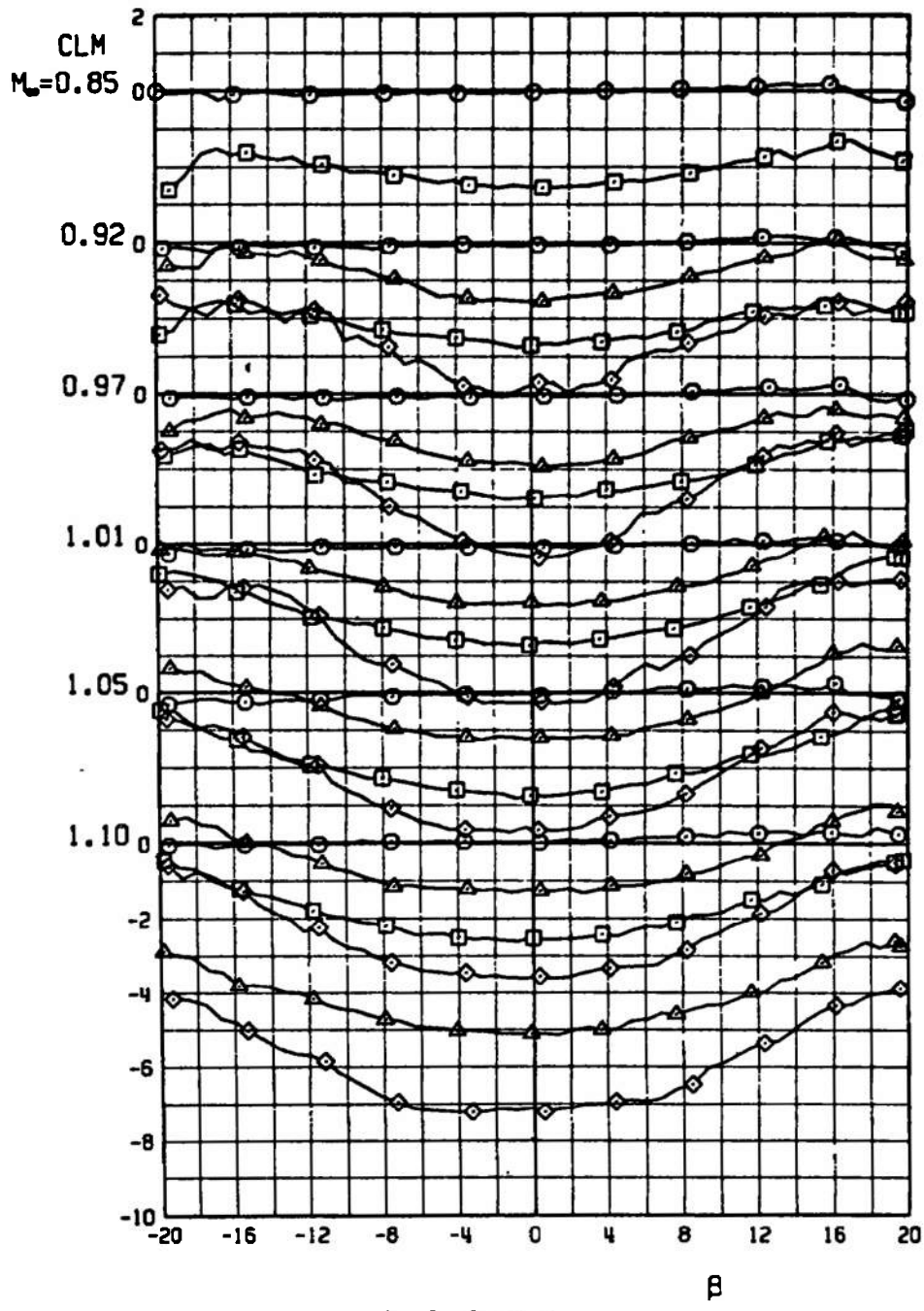
a. CN versus α

Figure 38. Test No. 6, comparison of aerodynamic coefficients of configuration B2WOF12 for combinations of α and β settings.

TEST CENTER NSRDC TEST 6

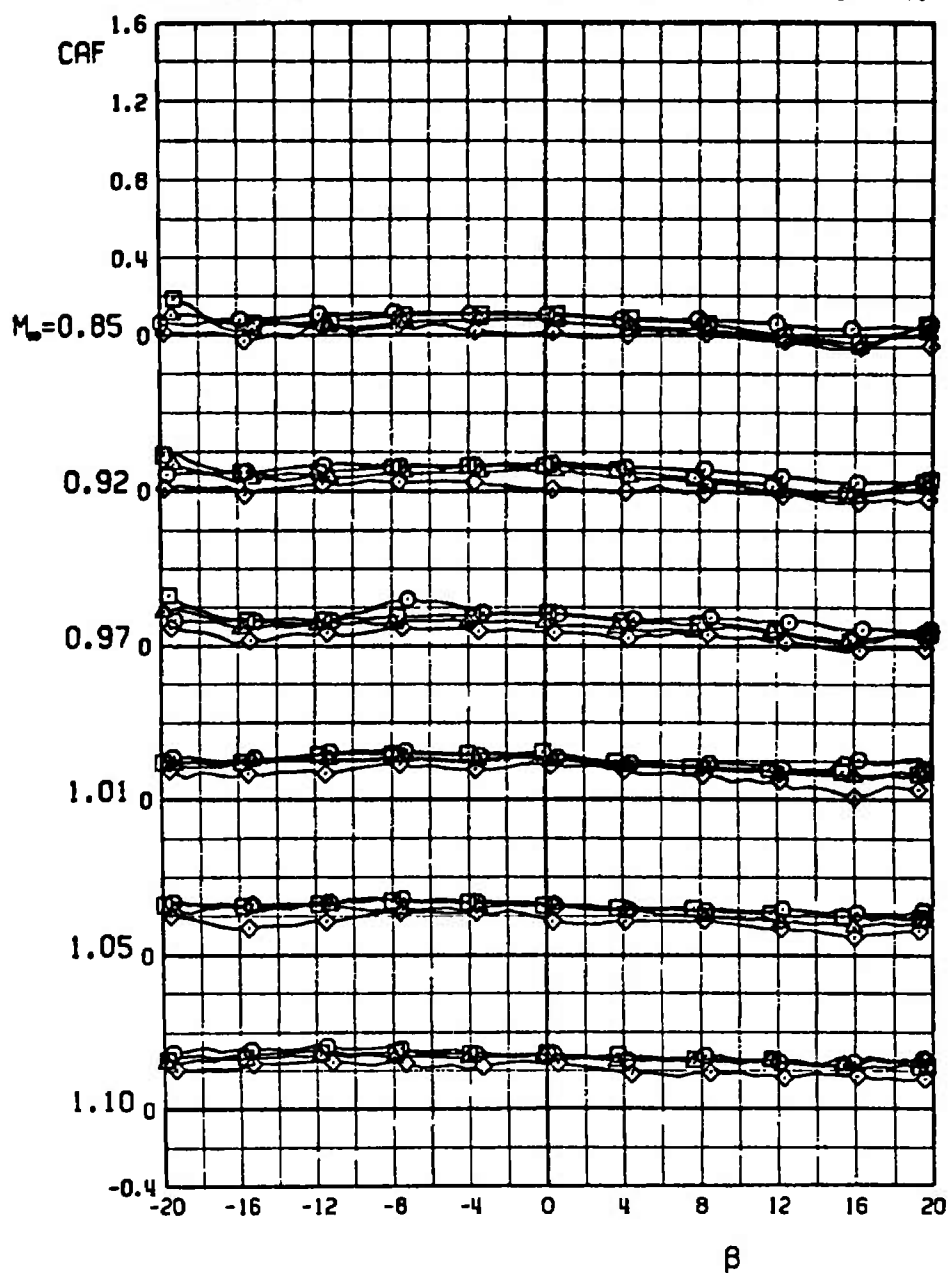
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	α
○	B2WOF12	0	0	0	0	0	0	0
□	B2WOF12	0	0	0	0	0	0	6
△	B2WOF12	0	0	0	0	0	0	12
◇	B2WOF12	0	0	0	0	0	0	18



b. CLM versus α
Figure 38. Continued.

TEST CENTER NSADC TEST 6

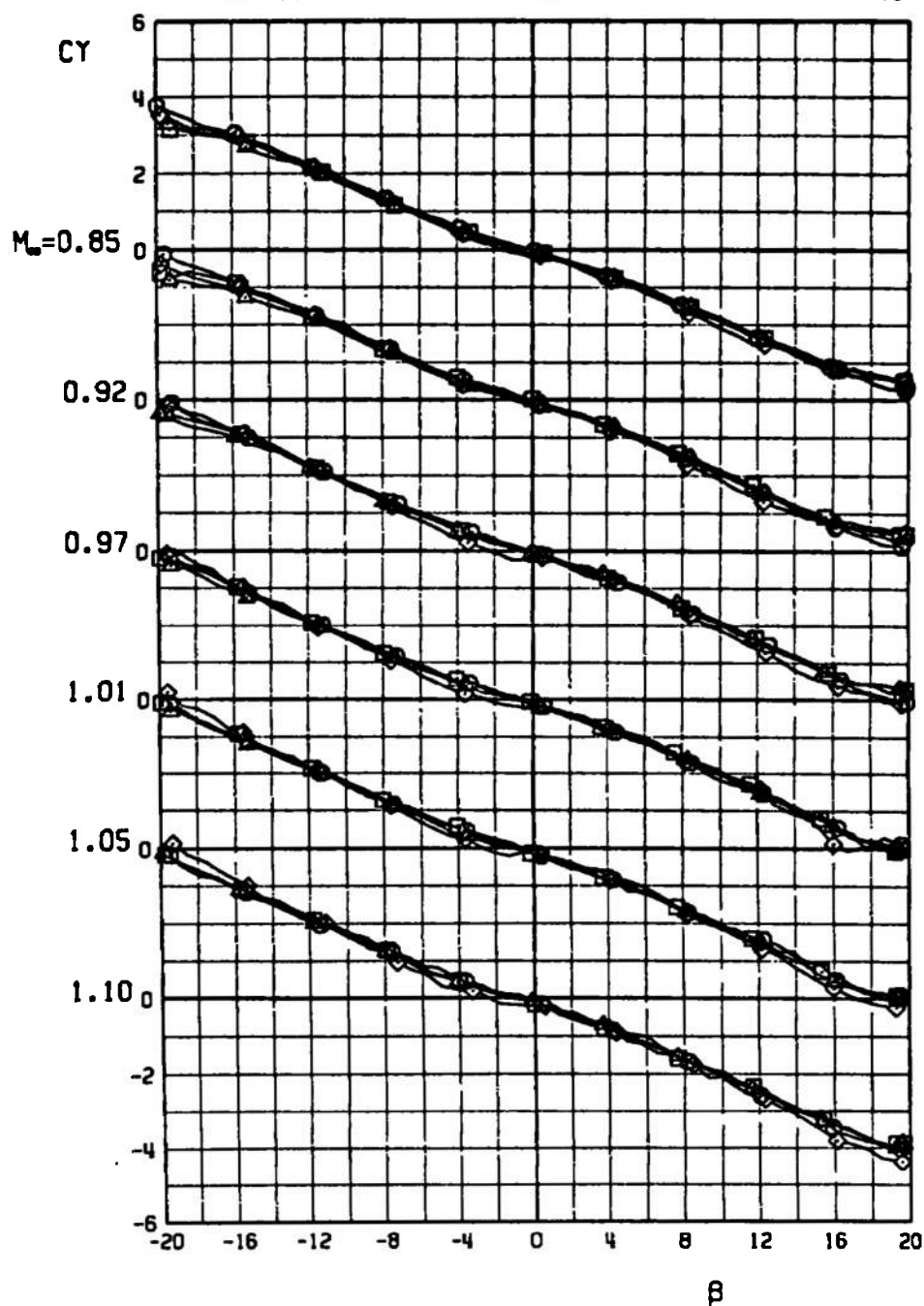
	CONF	L	DEL1	DEL2	DEL3	DEL4	PH1	α
○	B2WOF12	0	0	0	0	0	0	0
□	B2WOF12	0	0	0	0	0	0	6
△	B2WOF12	0	0	0	0	0	0	12
◇	B2WOF12	0	0	0	0	0	0	18



c. CAF versus β
Figure 38. Continued.

TEST CENTER NSRDC TEST 6

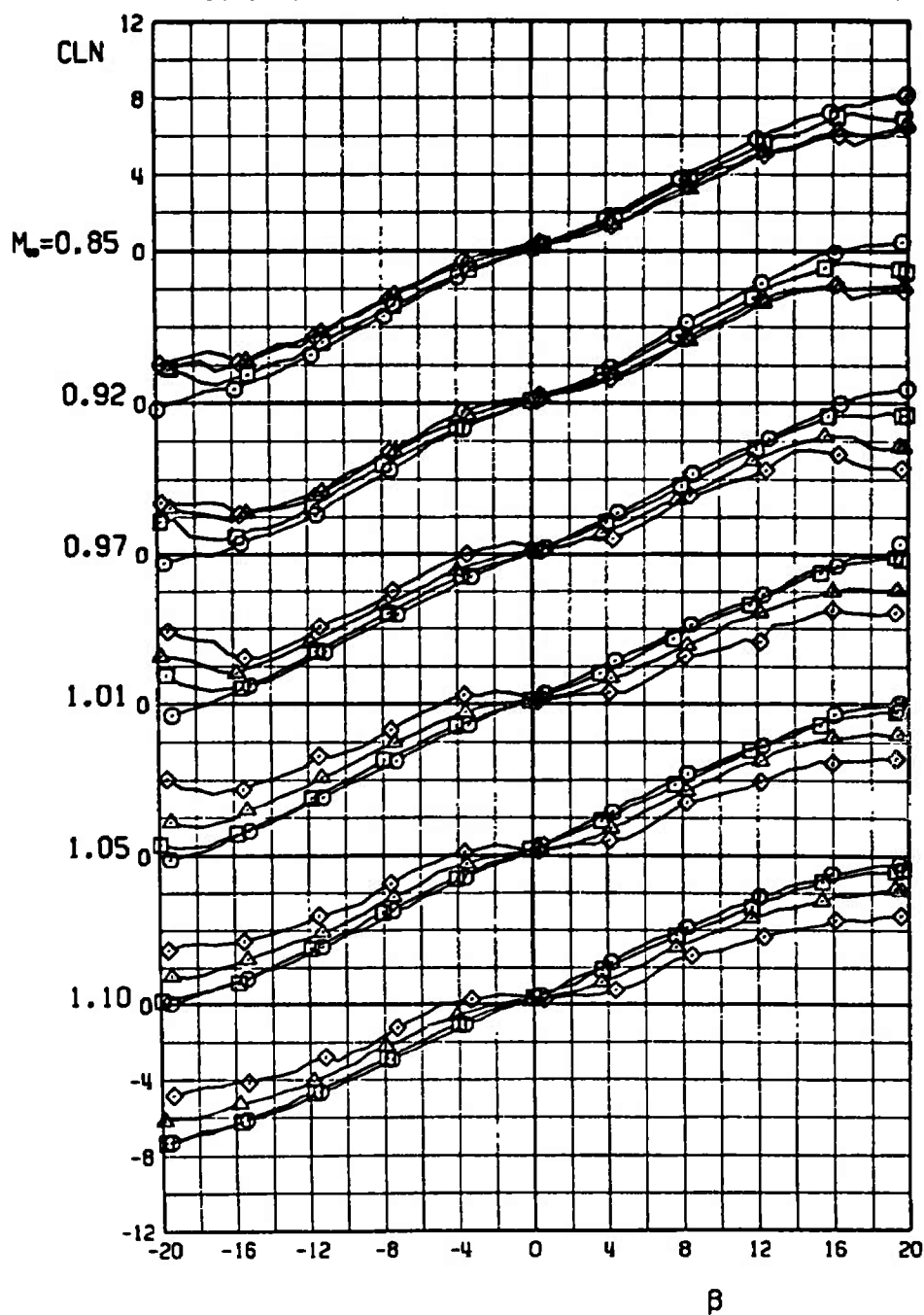
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	α
○	B2WOF12	0	0	0	0	0	0	0
□	B2WOF12	0	0	0	0	0	0	6
△	B2WOF12	0	0	0	0	0	0	12
◇	B2WOF12	0	0	0	0	0	0	18



d. C_Y versus β
Figure 38. Continued.

TEST CENTER NSRDC TEST 6

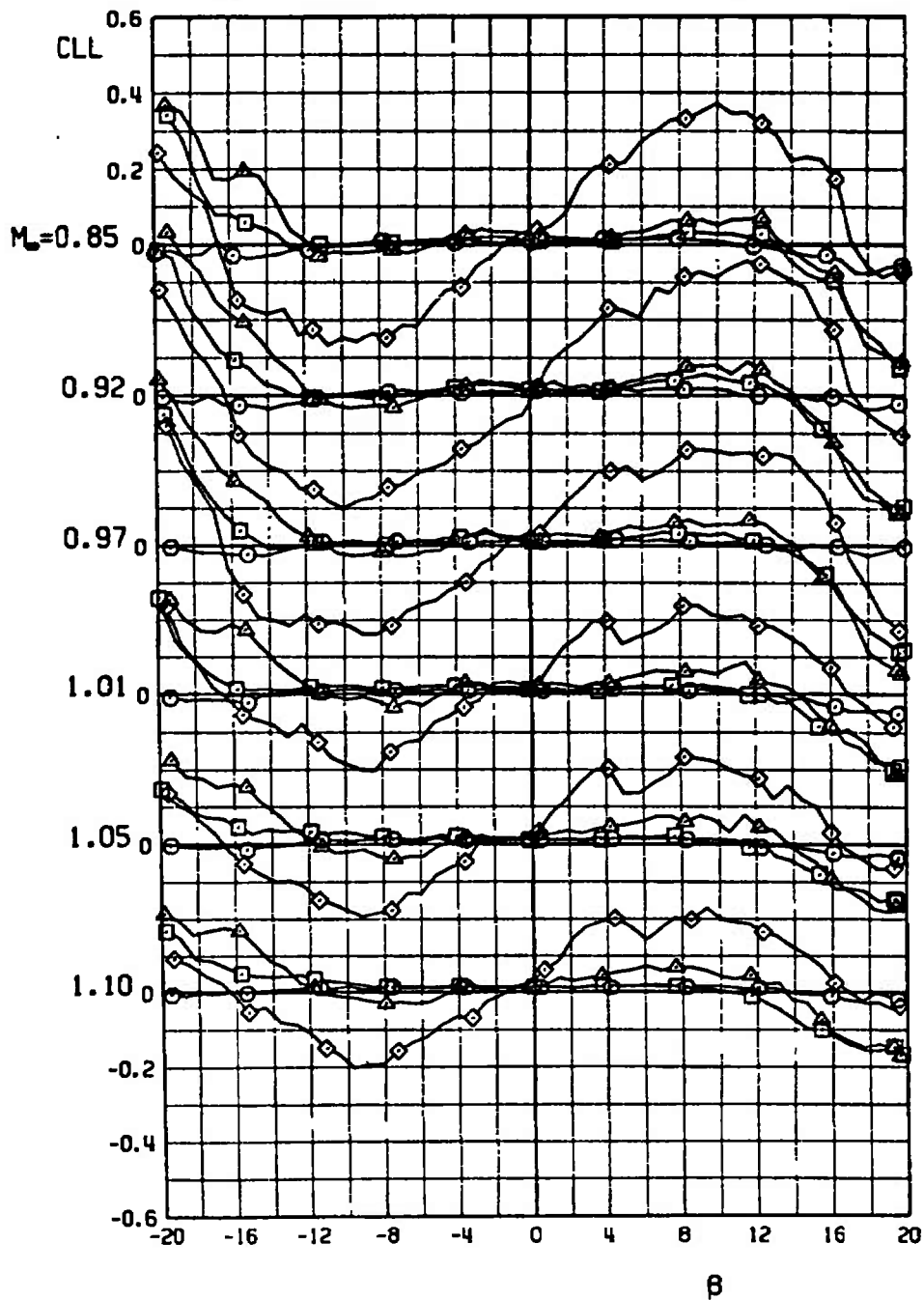
	CONF	L	OEL1	OEL2	OEL3	OEL4	PH1	α
○	B2WOF12	0	0	0	0	0	0	0
□	B2WOF12	0	0	0	0	0	0	6
△	B2WOF12	0	0	0	0	0	0	12
◇	B2WOF12	0	0	0	0	0	0	18



e. CL_N versus β
Figure 38. Continued.

TEST CENTER NSRDC TEST 6

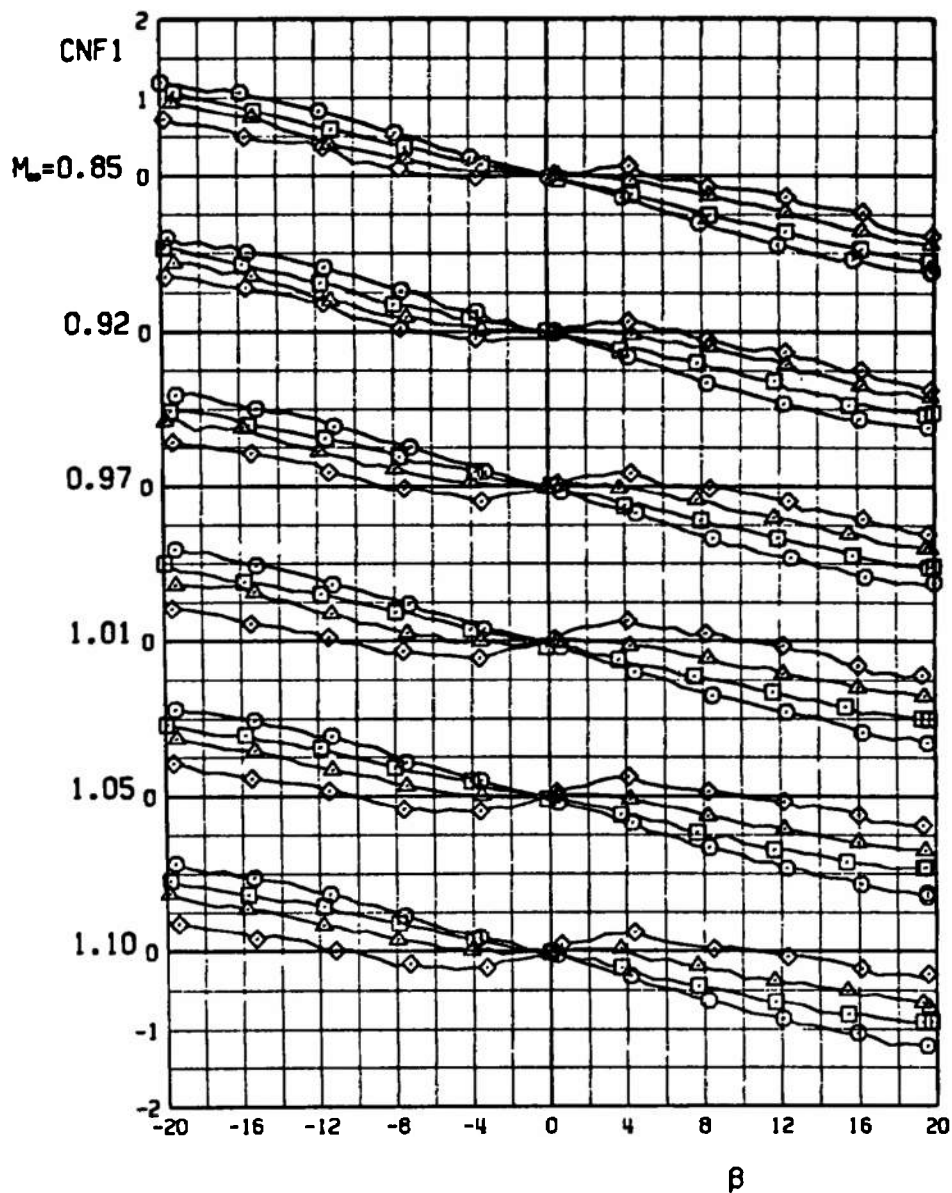
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	α
○	B2WOF12	0	0	0	0	0	0	3
□	B2WOF12	0	0	0	0	0	0	6
△	B2WOF12	0	0	0	0	0	0	12
◇	B2WOF12	0	0	0	0	0	0	18



f. CLL versus β
Figure 38. Continued.

TEST CENTER NSRDC TEST 6

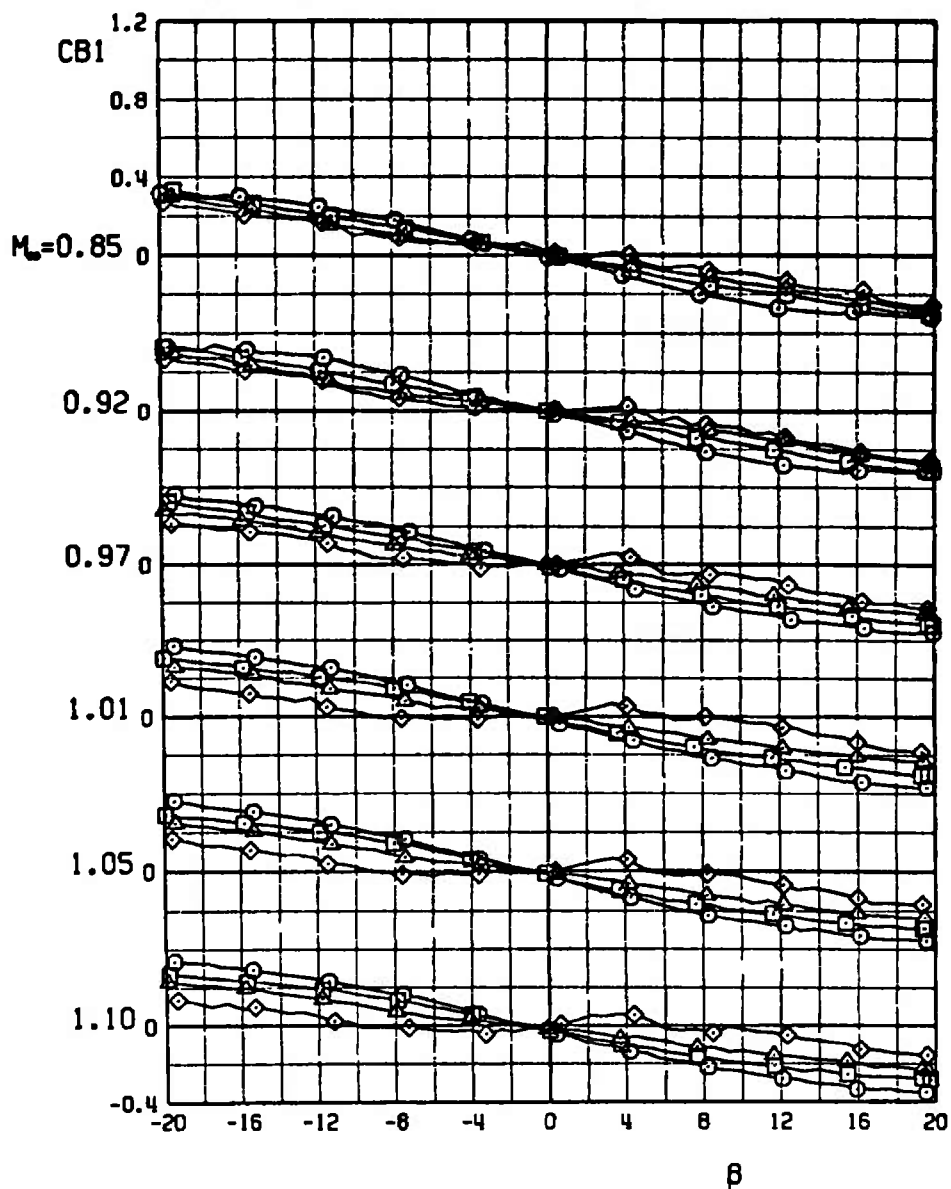
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	α
○	B2WOF12	0	0	0	0	0	0	0
□	B2WOF12	0	0	0	0	0	0	6
△	B2WOF12	0	0	0	0	0	0	12
◇	B2WOF12	0	0	0	0	0	0	18



g. CNF1 versus β
Figure 38. Continued.

TEST CENTER NSRDC TEST 6

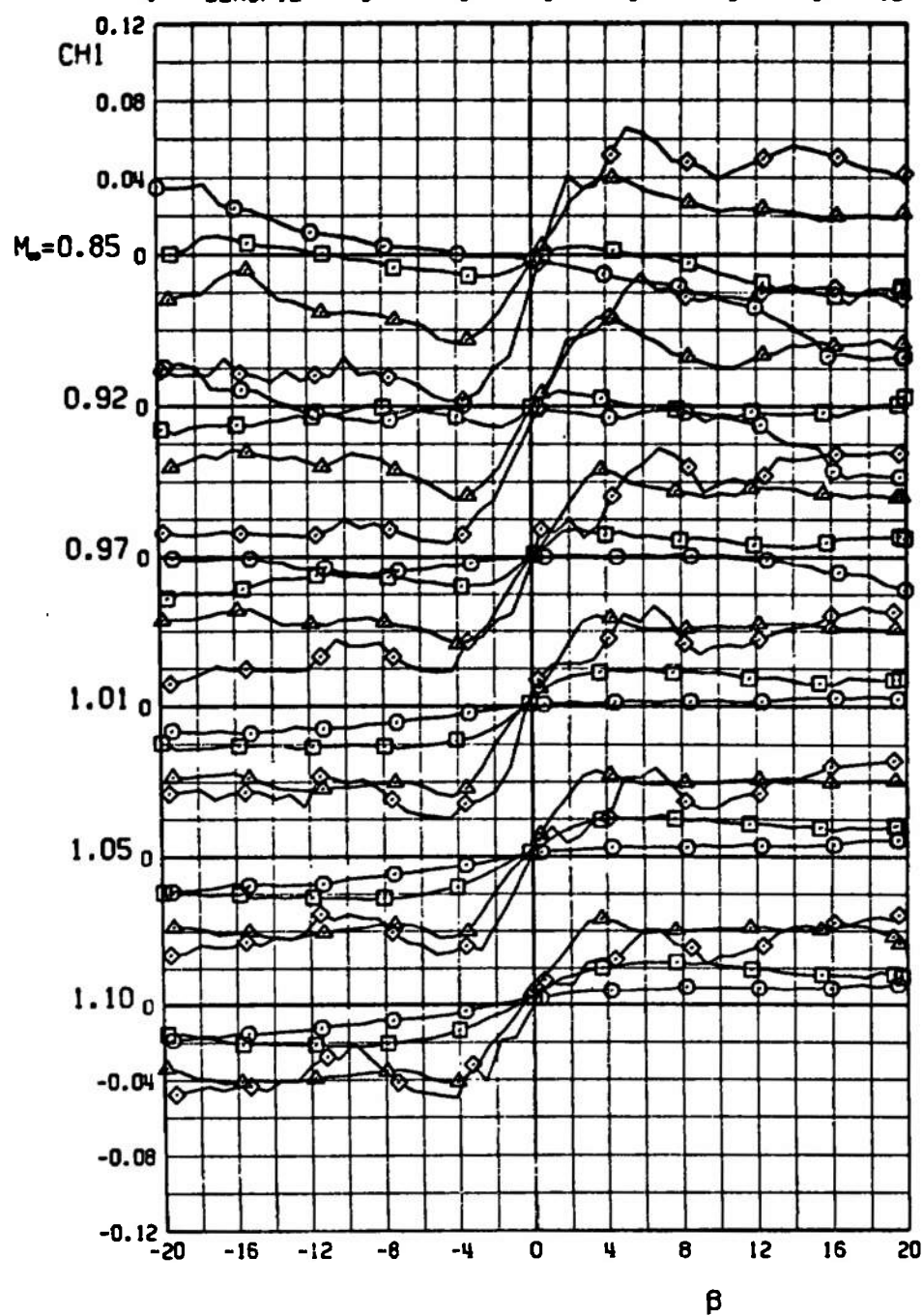
	CONF	L	DEL1	DEL2	DEL3	OEL4	PHI	α
○	B2WOF12	0	0	0	0	0	0	0
□	B2WOF12	0	0	0	0	0	0	6
△	B2WOF12	0	0	0	0	0	0	12
◇	B2WOF12	0	0	0	0	0	0	18



h. CB1 versus β
Figure 38. Continued.

TEST CENTER NSRDC TEST 6

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	α
○	B2WOF12	0	0	0	0	0	0	0
□	B2WOF12	0	0	0	0	0	0	6
△	B2WOF12	0	0	0	0	0	0	12
◇	B2WOF12	0	0	0	0	0	0	18



i. $CH1$ versus β
Figure 38. Concluded.

TEST CENTER NSROC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F11	0	0	0	0	0	0
□	B1W0F11	0	0	-10	0	-10	0
△	B1W0F11	0	0	-20	0	-20	0
◇	B1W0F11	0	0	-30	0	-30	0

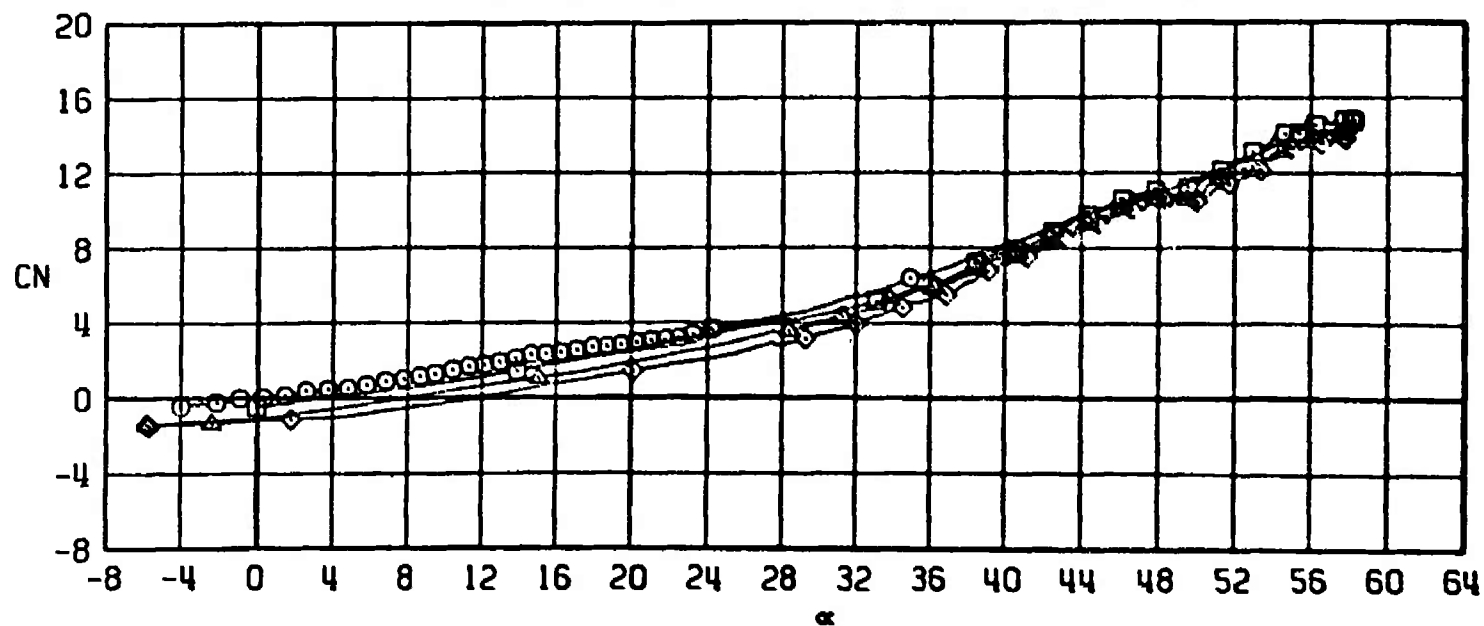
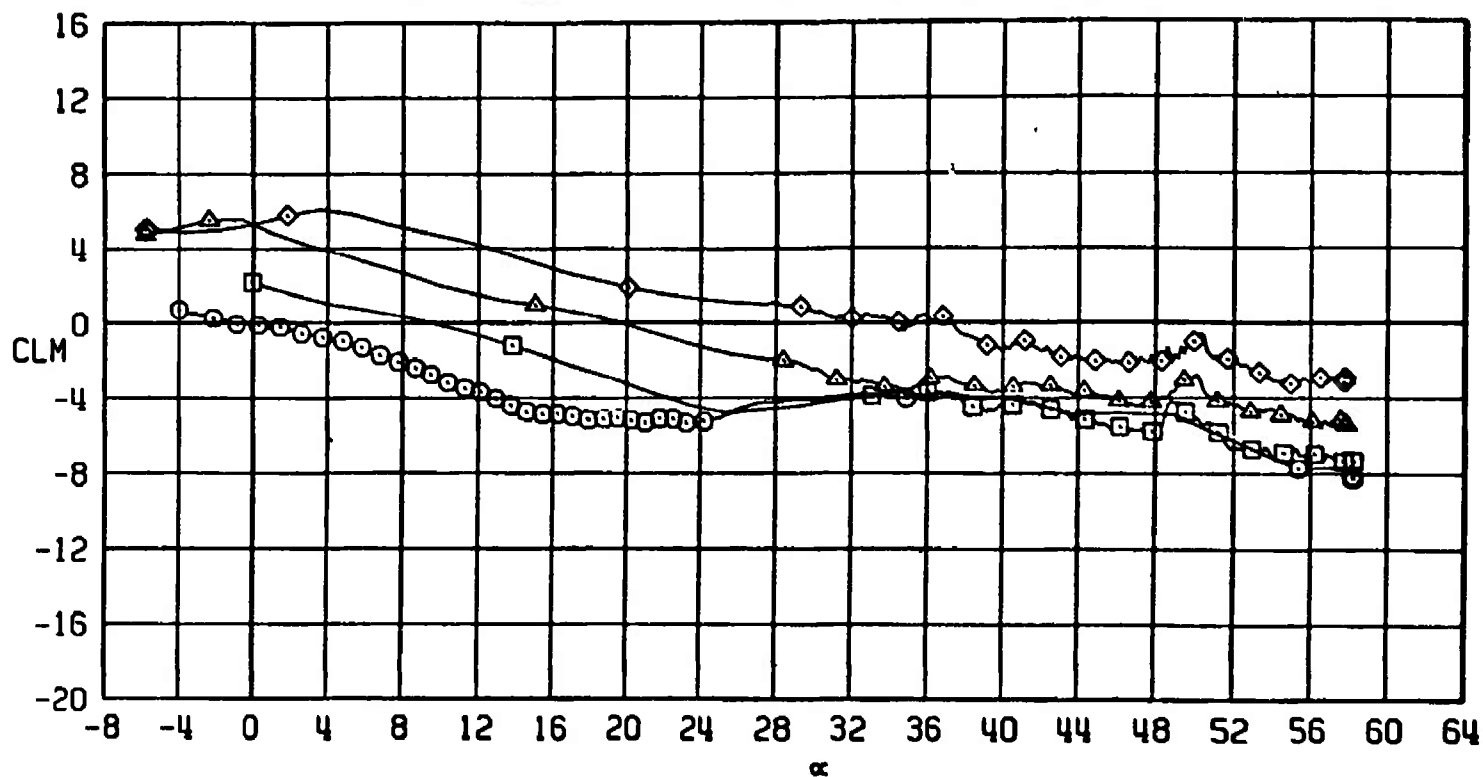
a. C_N versus α

Figure 39. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F11 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.8$.

TEST CENTER NSRDC TEST 7

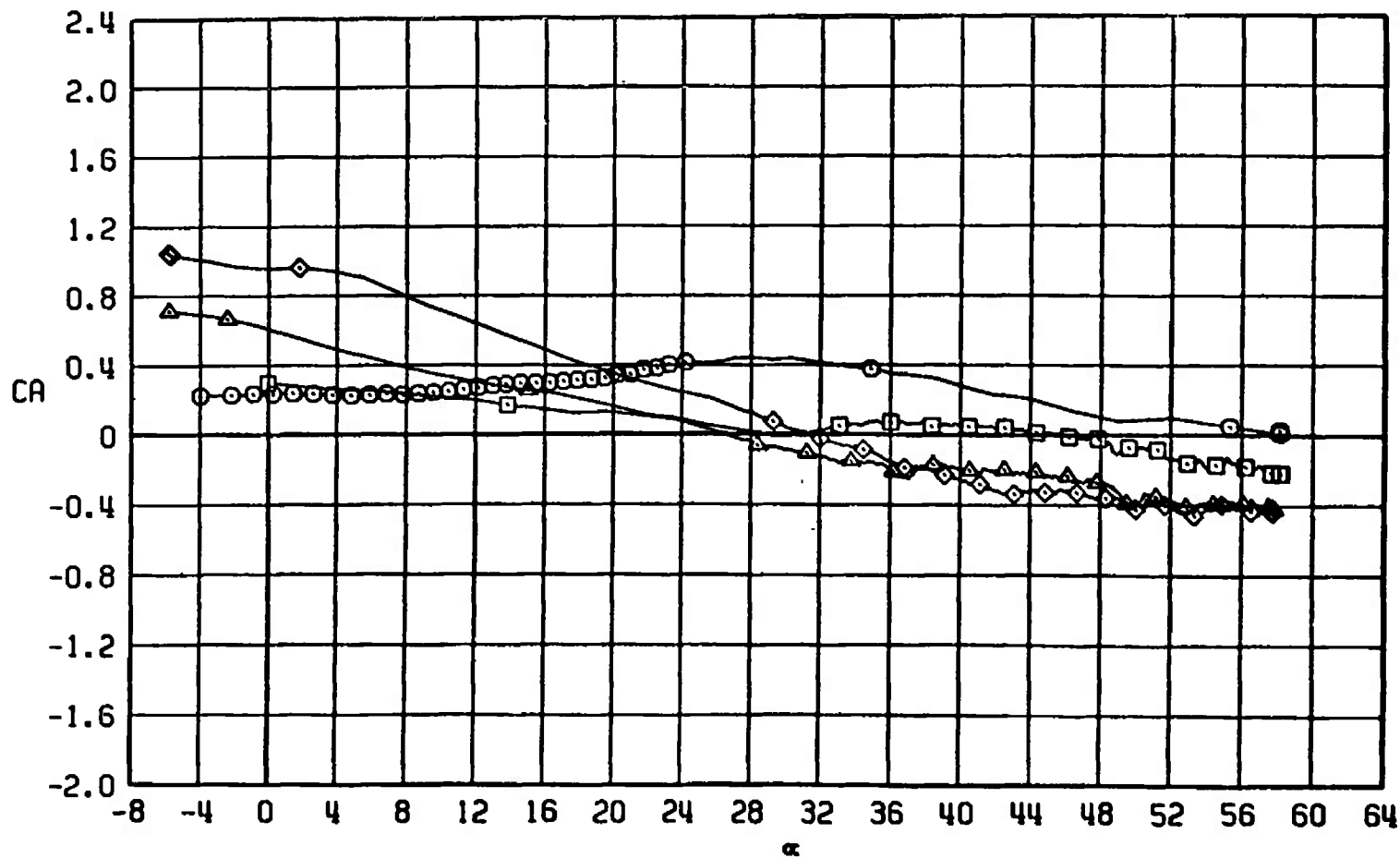
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



b. CLM versus α
Figure 39. Continued.

TEST CENTER NSRDC TEST 7

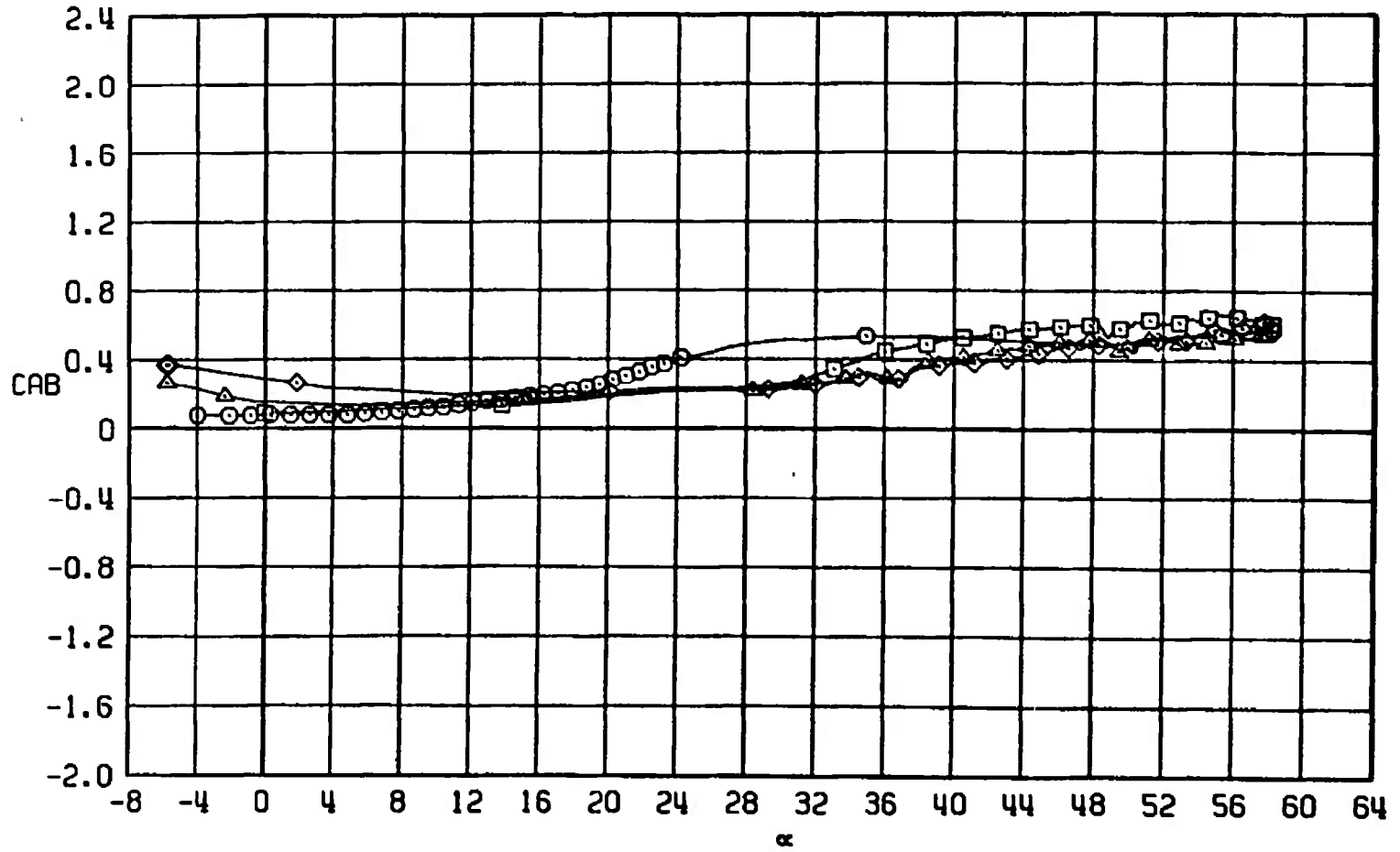
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



c. CA versus α
Figure 39. Continued.

TEST CENTER NSRDC TEST 7

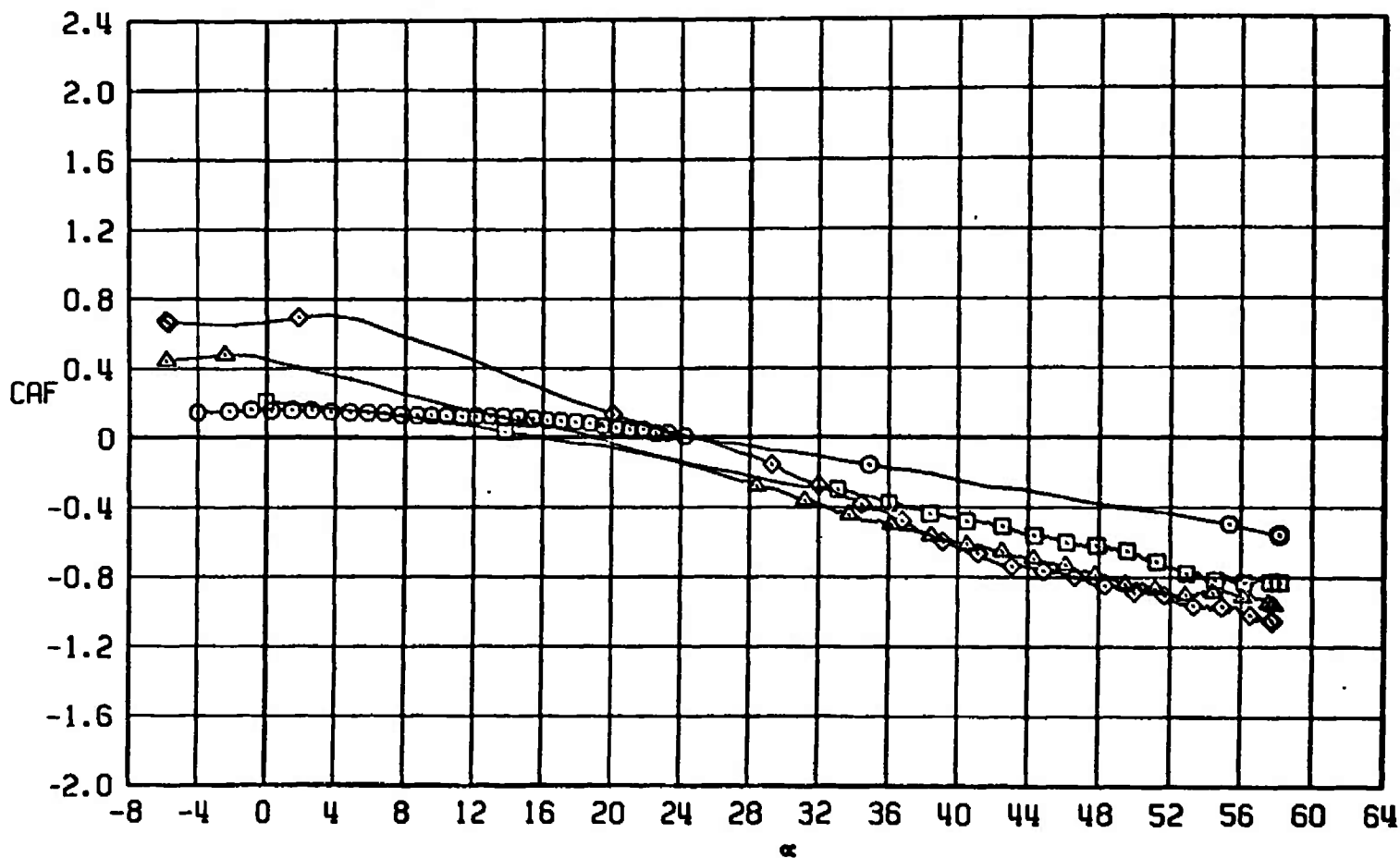
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



d. CAB versus α
Figure 39. Continued.

TEST CENTER NSRDC TEST 7

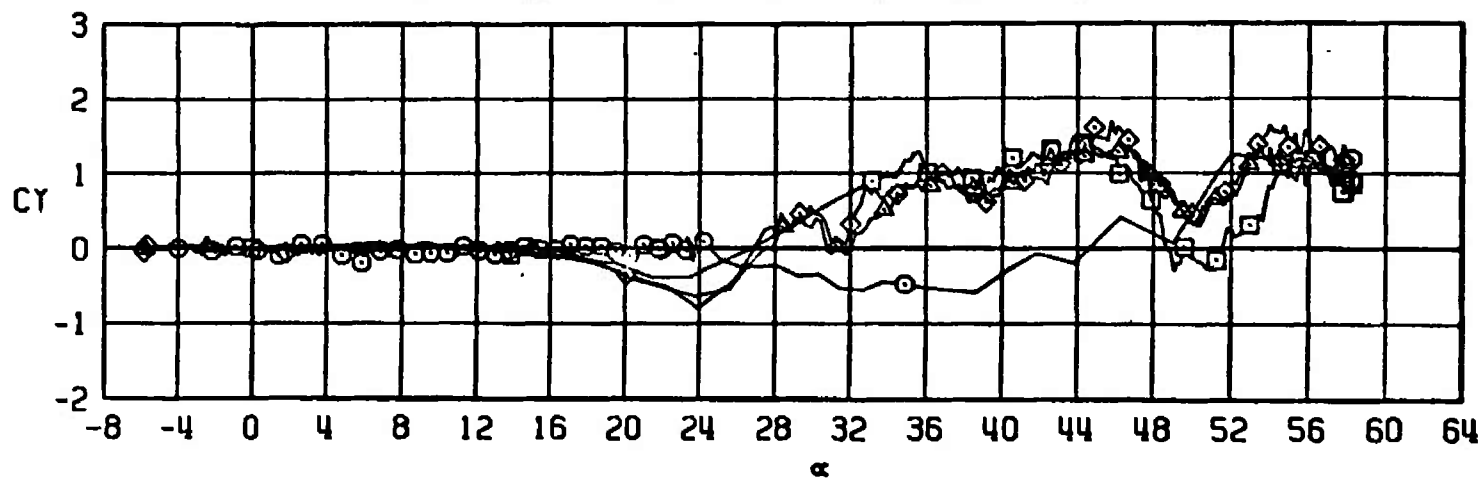
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
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□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



e. CAF versus α
Figure 39. Continued.

TEST CENTER NSRDC TEST 7

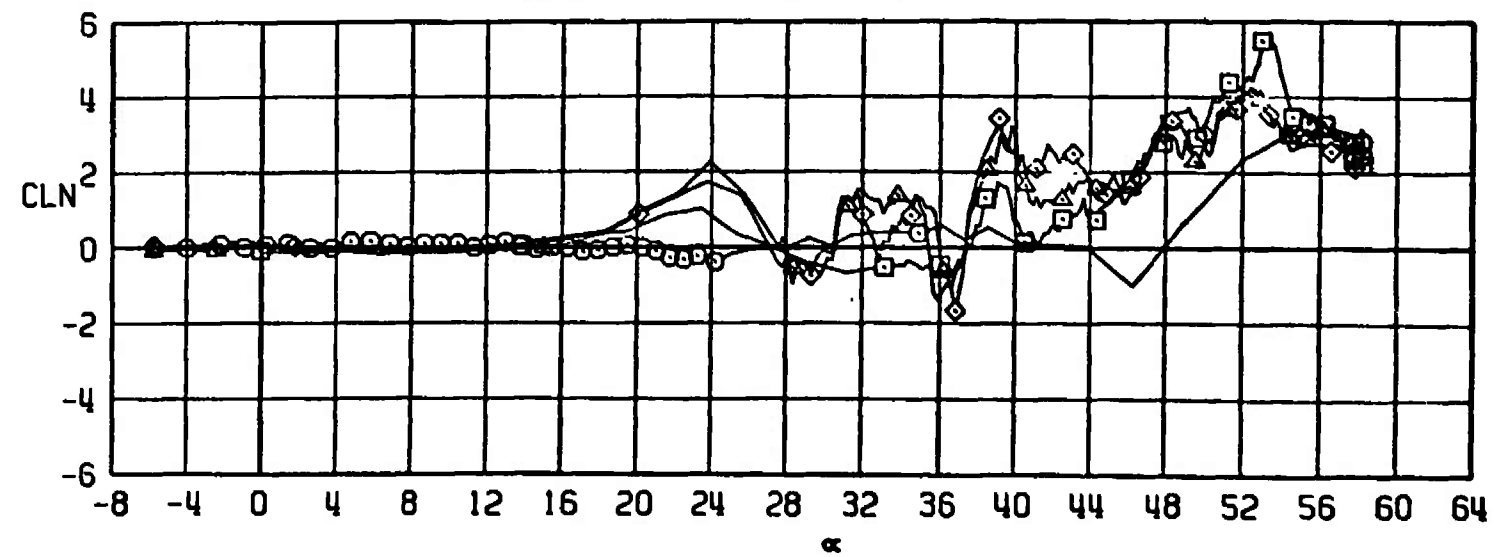
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



f. CY versus α
Figure 39. Continued.

TEST CENTER NSRDC TEST 7

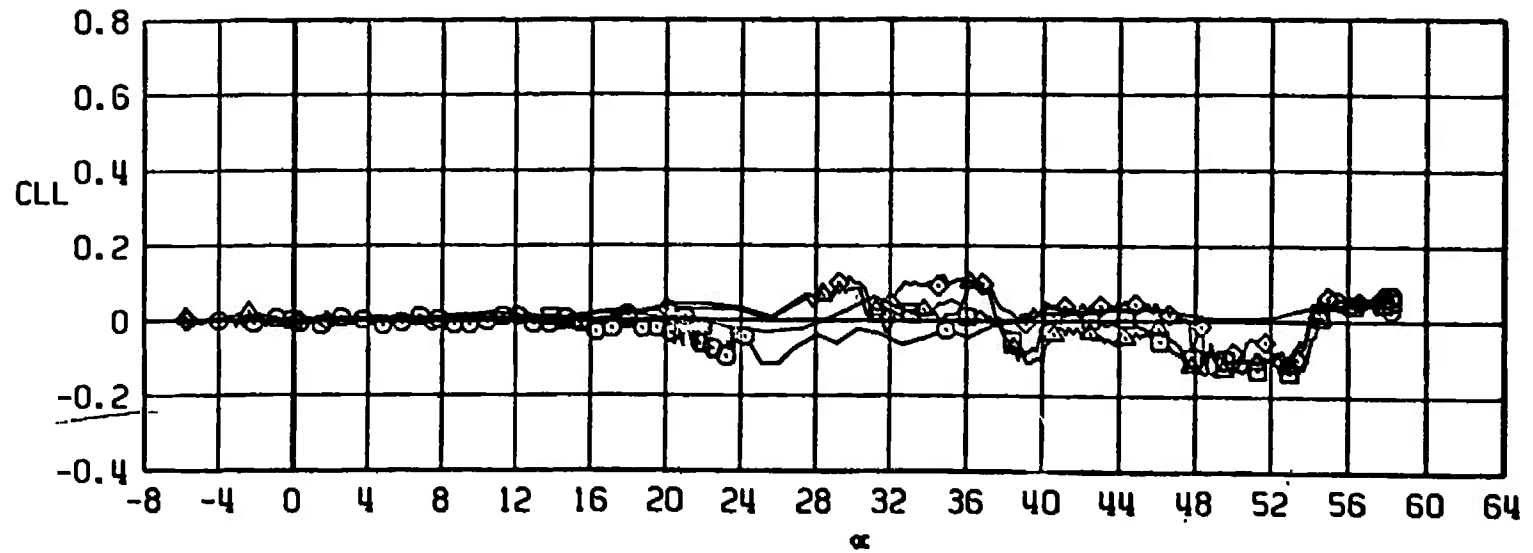
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



g. CLN versus α
Figure 39. Continued.

TEST CENTER NSRDC TEST 7

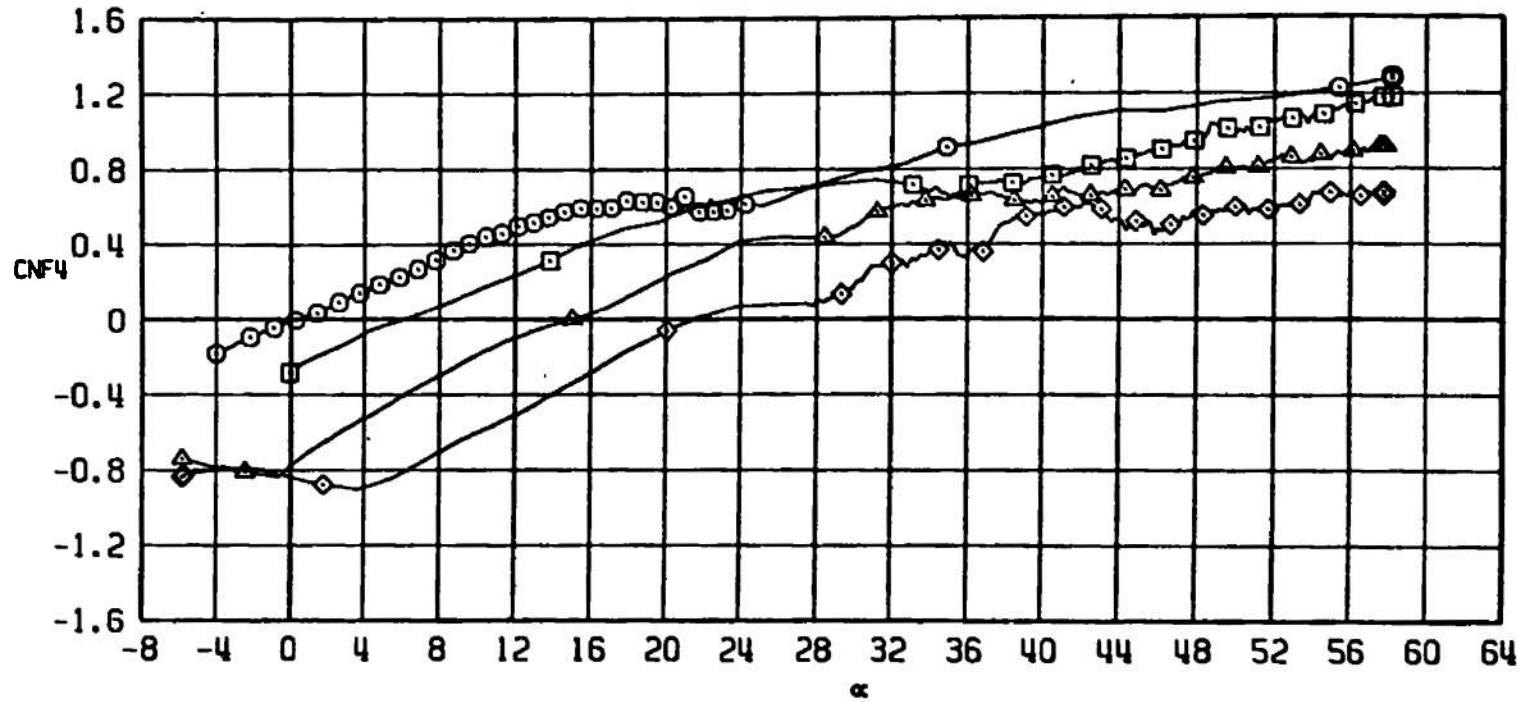
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF11	0	0	0	0	0	0
□	81WOF11	0	0	-10	0	-10	0
△	81WOF11	0	0	-20	0	-20	0
◇	81WOF11	0	0	-30	0	-30	0



h. CLL versus α
Figure 39. Continued.

TEST CENTER NSRDC TEST 7

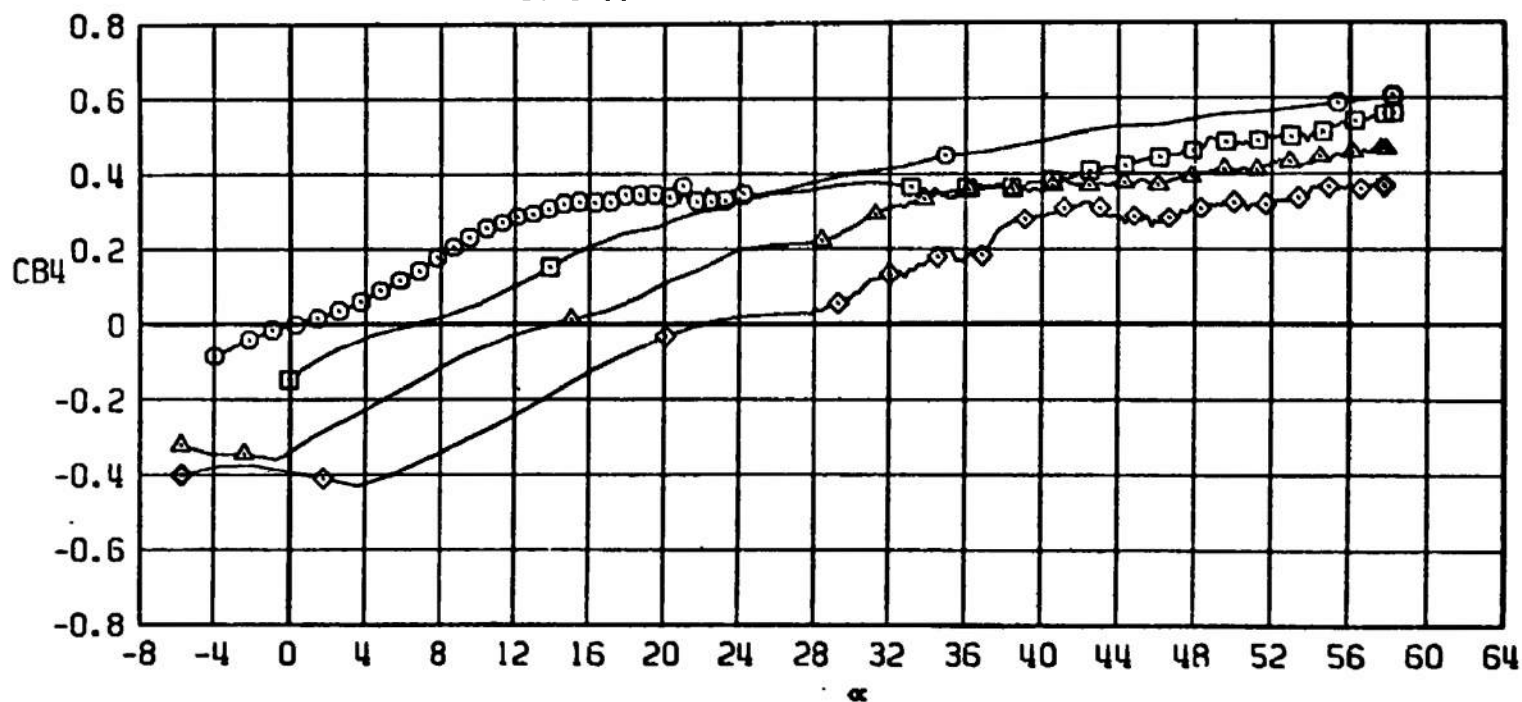
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 39. Continued.

TEST CENTER NSRDC TEST 7

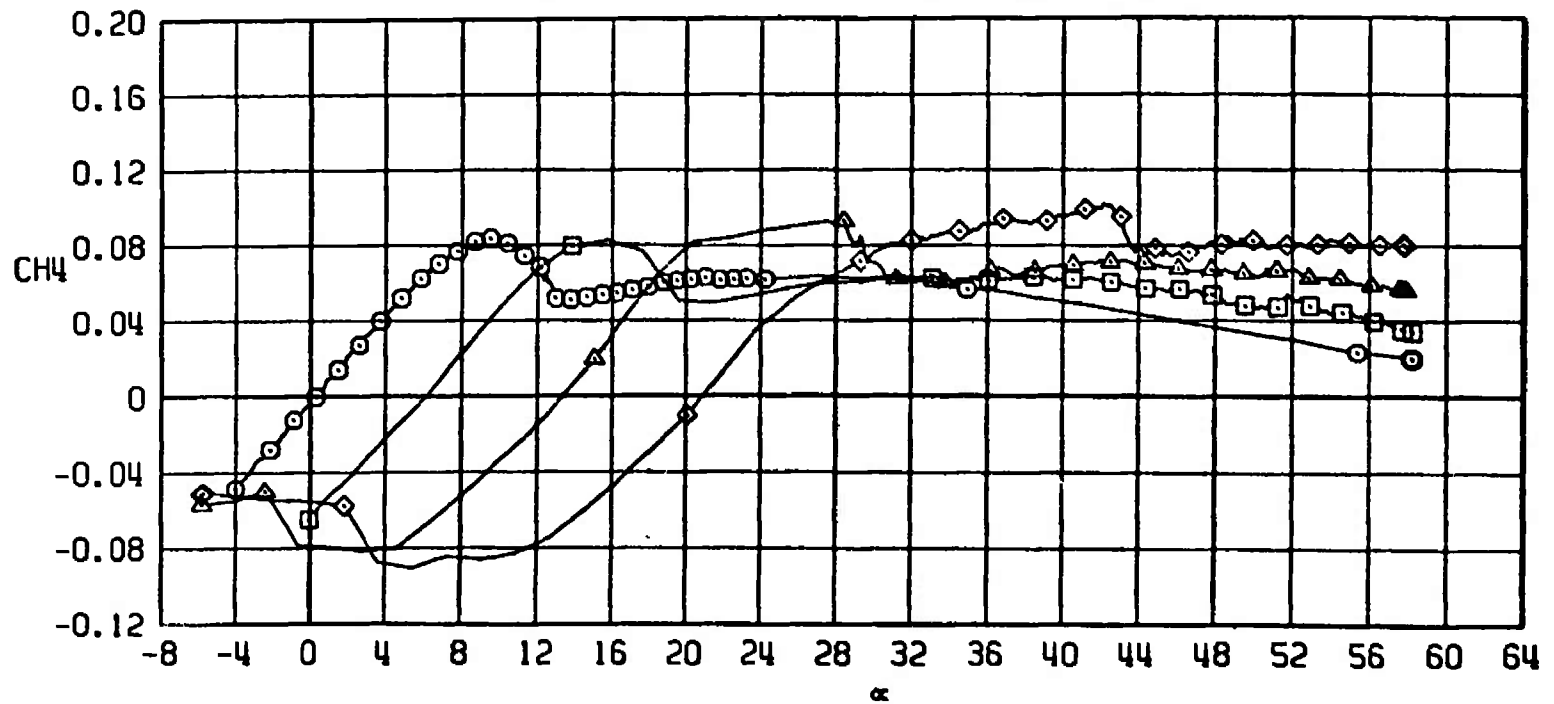
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



j. CB4 versus α
Figure 39. Continued.

TEST CENTER NSROC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



k. CH4 versus α
Figure 39. Concluded.

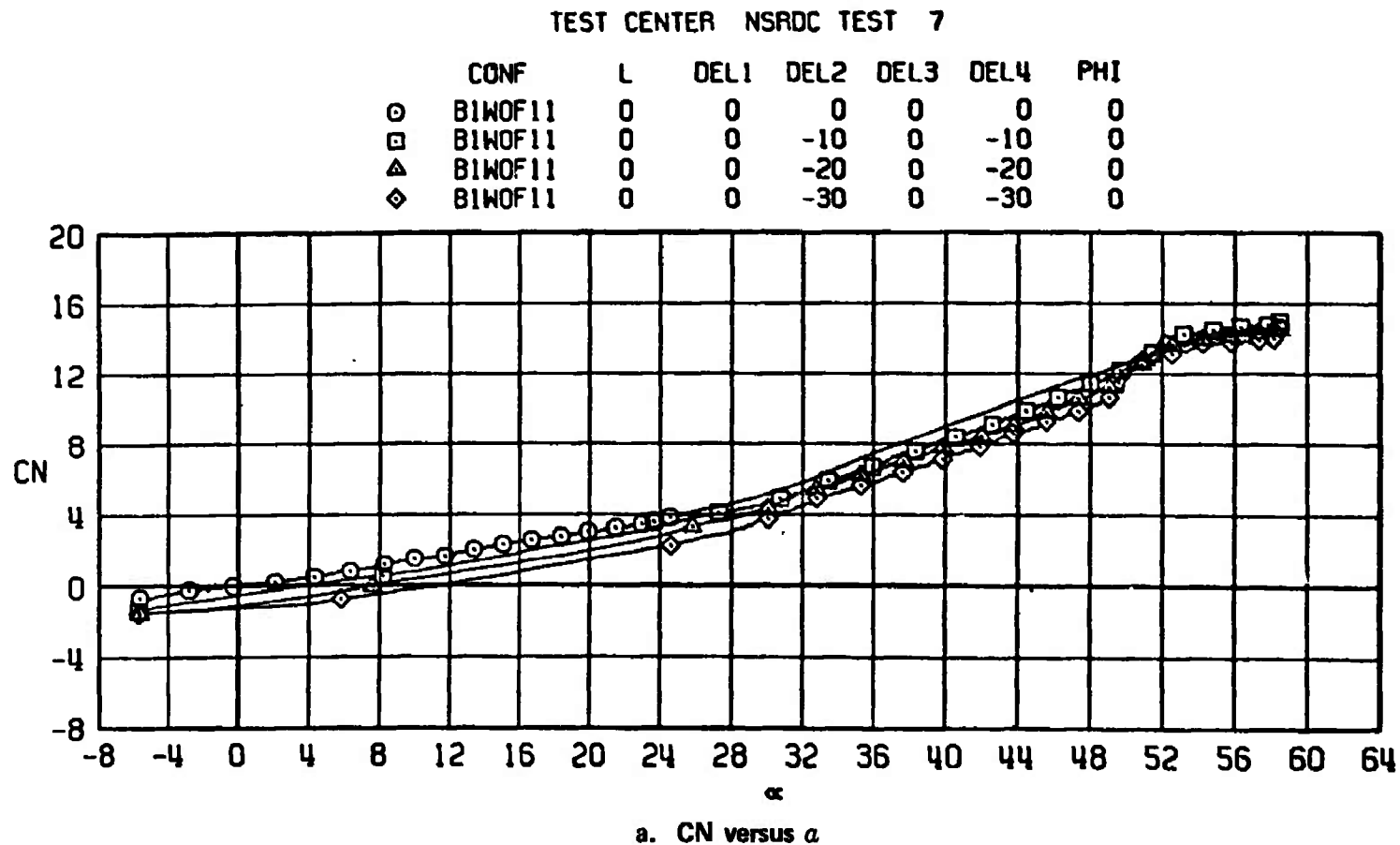
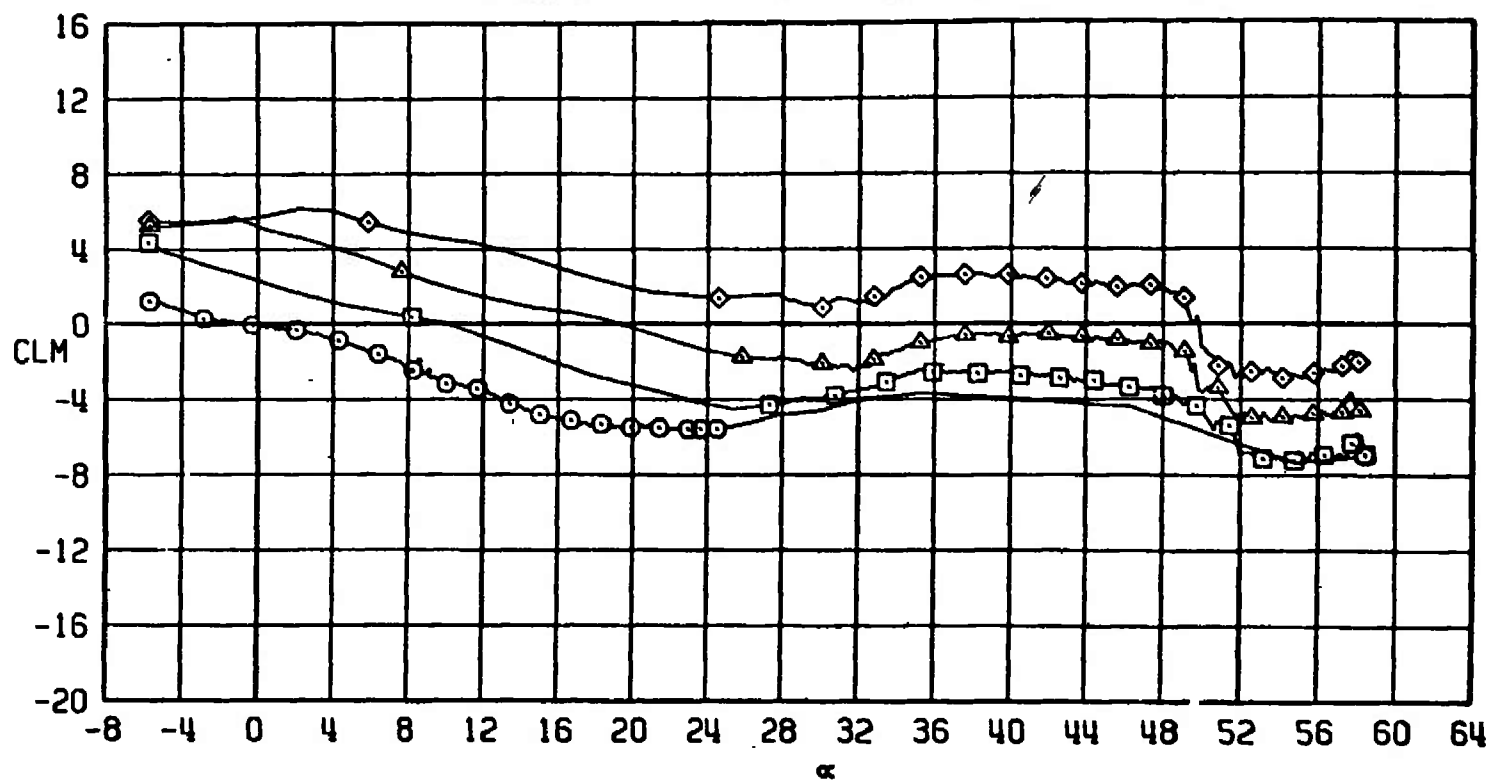


Figure 40. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F11 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.9$.

TEST CENTER NSRDC TEST 7

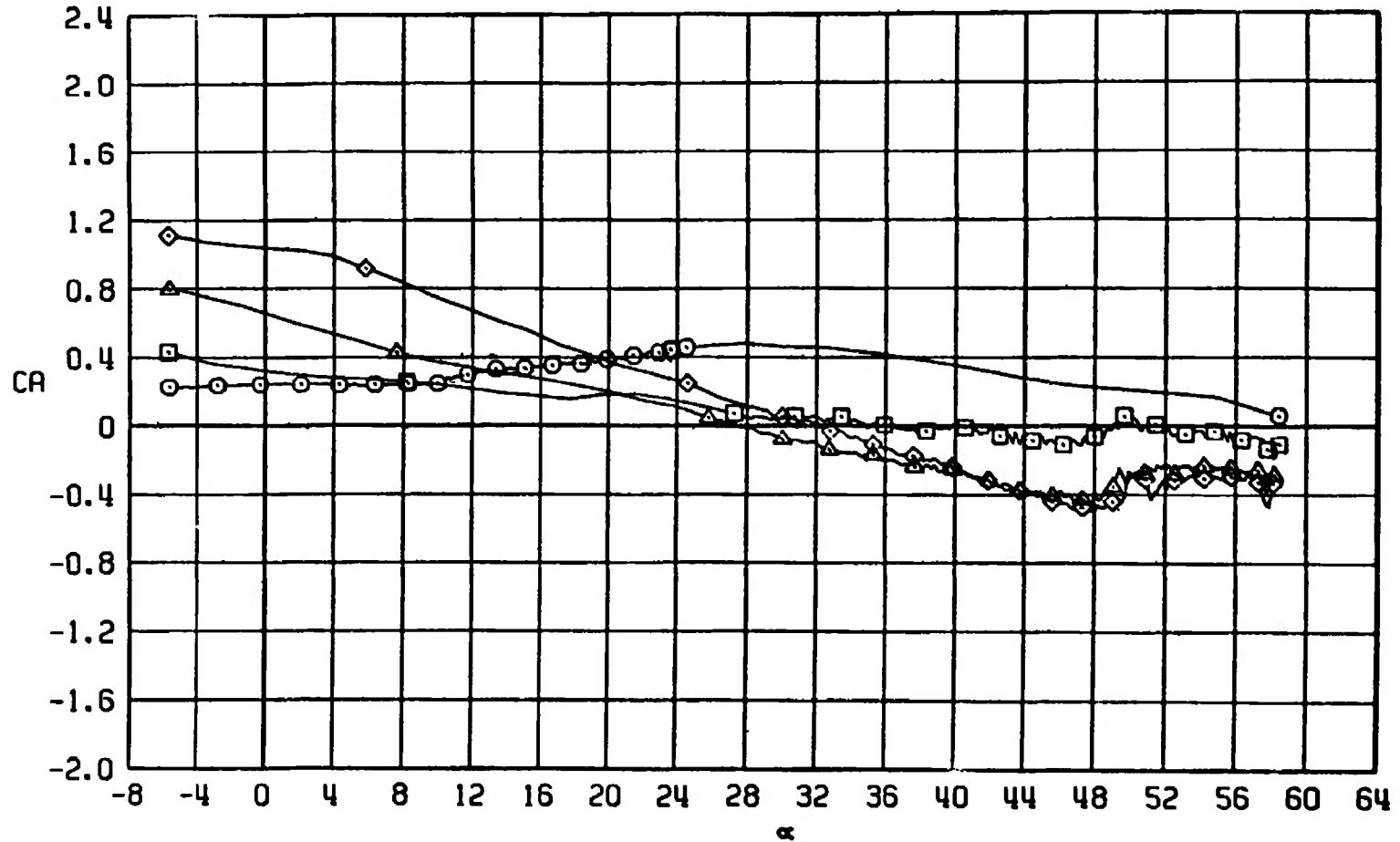
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



b. CLM versus α
Figure 40. Continued.

TEST CENTER NSRDC TEST 7

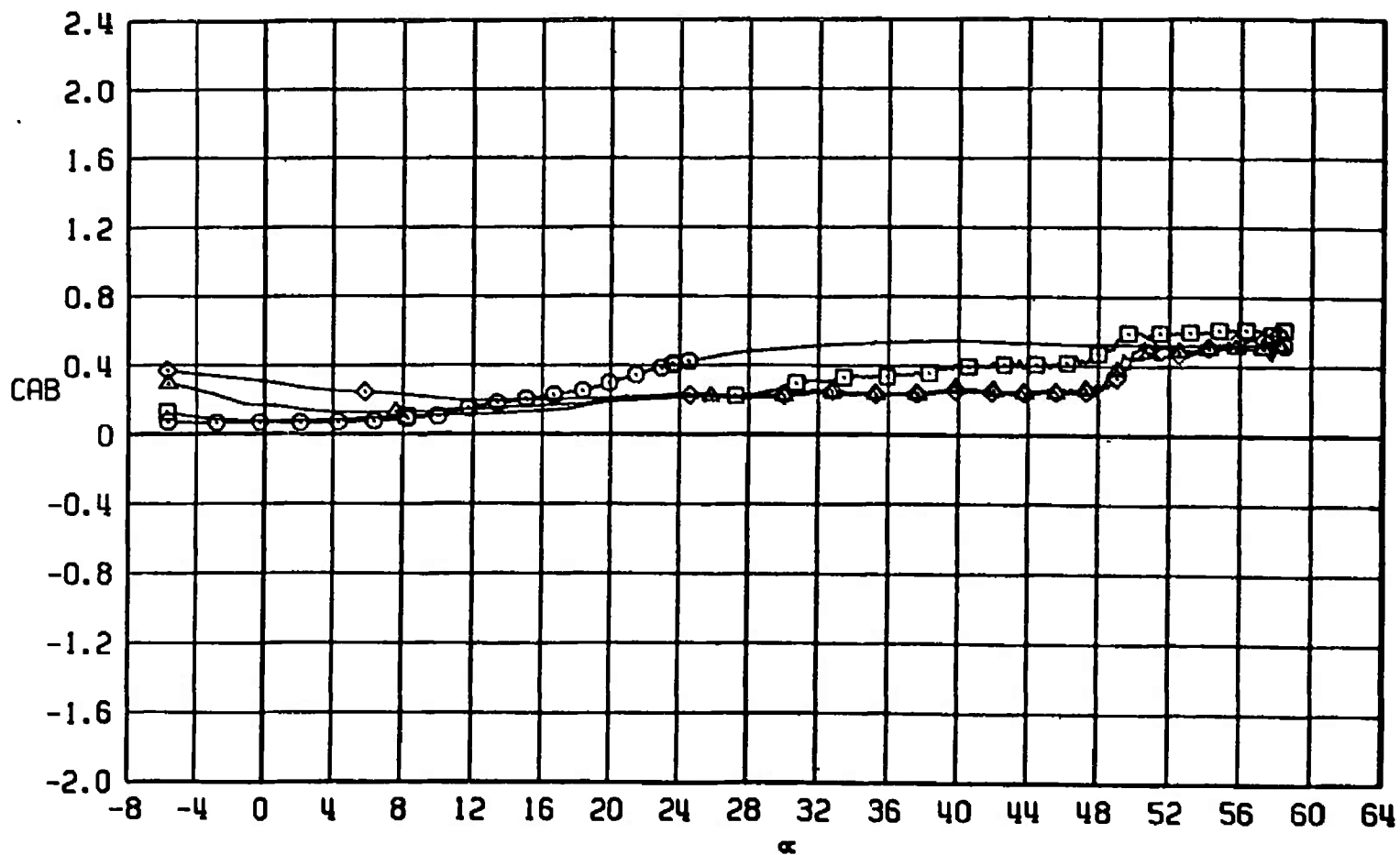
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



c. CA versus α
Figure 40. Continued.

TEST CENTER NSROC TEST 7

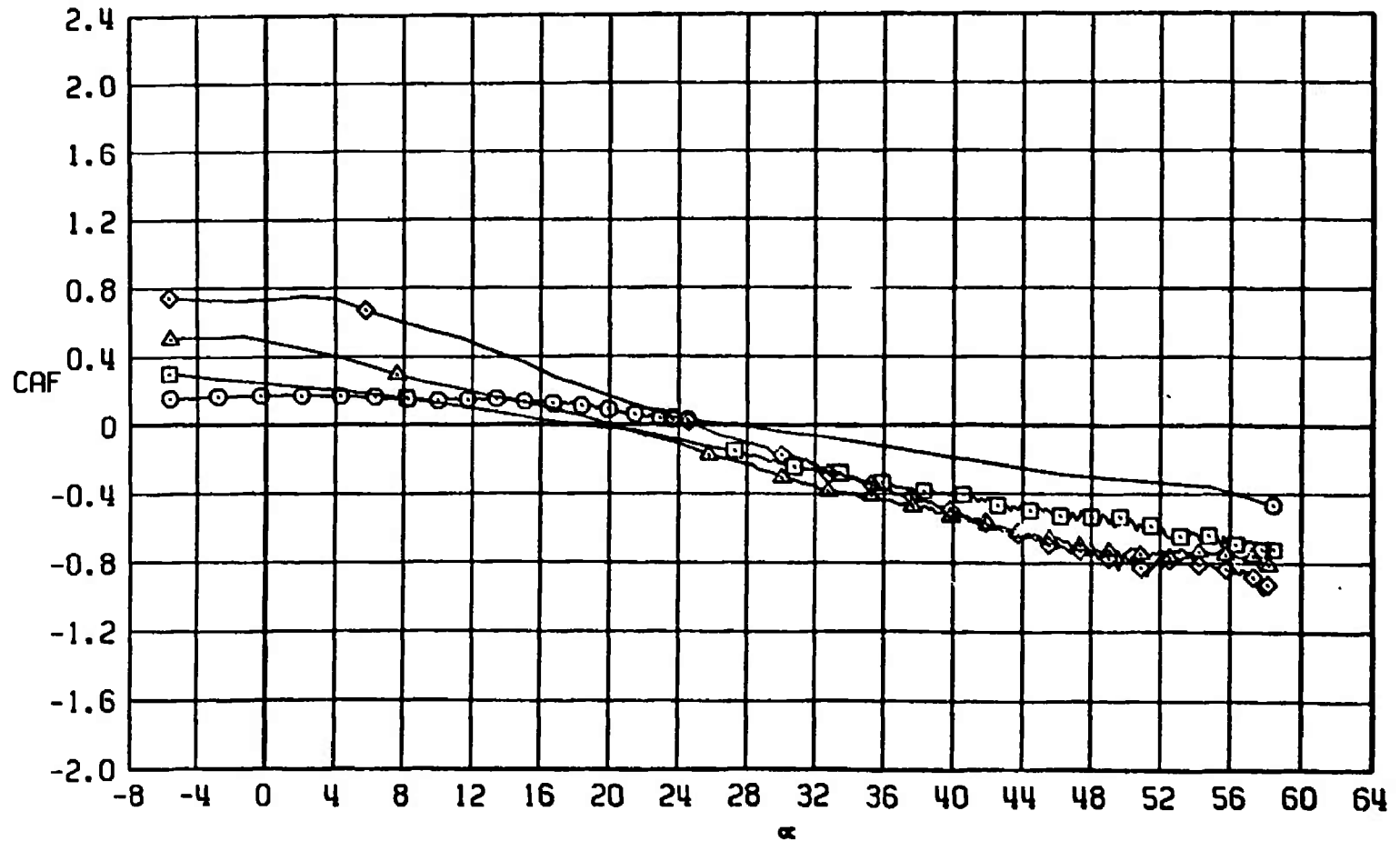
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF11	0	0	0	0	0	0
□	B1WOF11	0	0	-10	0	-10	0
△	B1WOF11	0	0	-20	0	-20	0
◇	B1WOF11	0	0	-30	0	-30	0



d. CAB versus α
Figure 40. Continued.

TEST CENTER NSRDC TEST 7

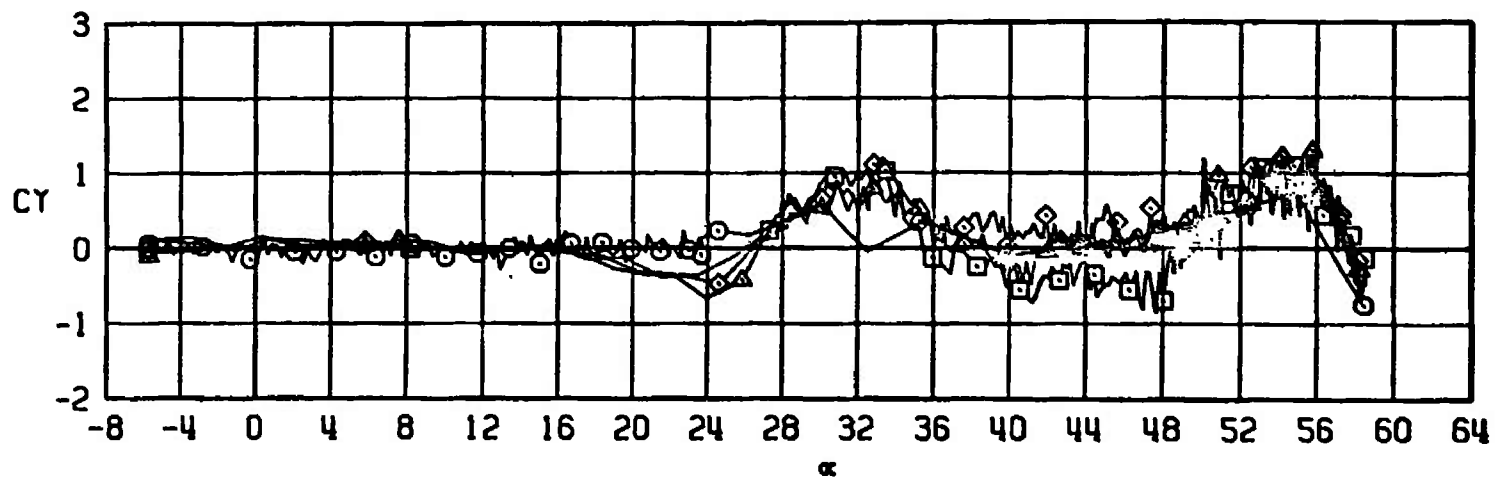
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



e. CAF versus α
Figure 40. Continued.

TEST CENTER NSRDC TEST 7

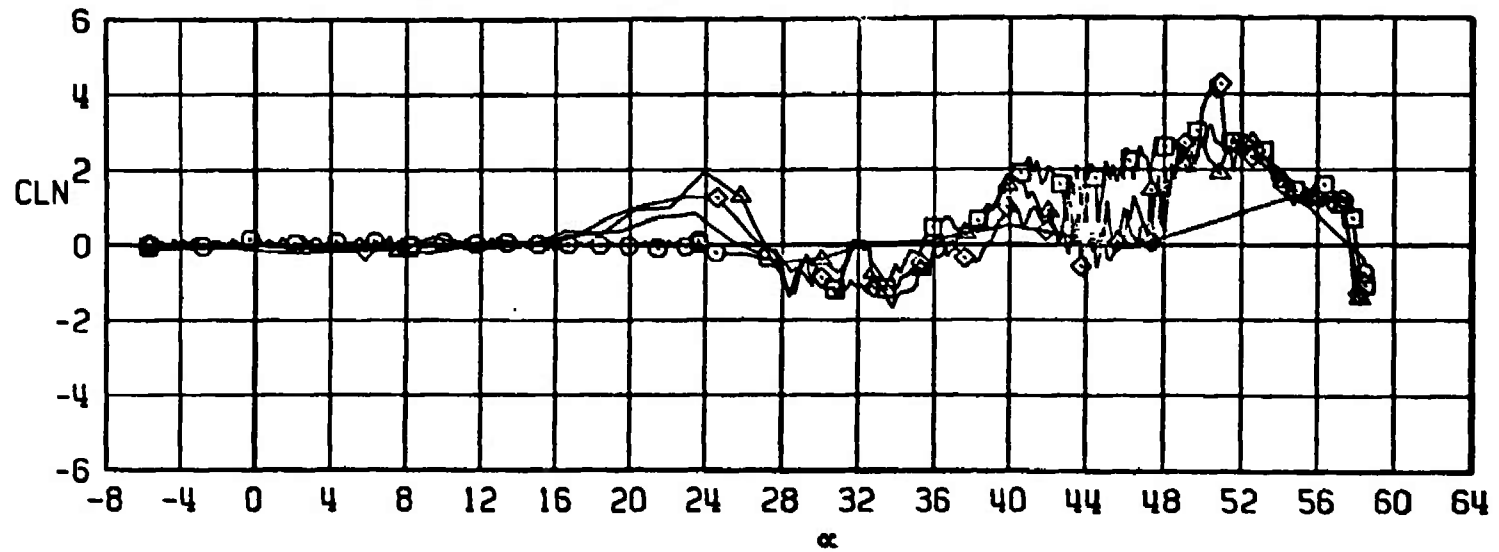
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF11	0	0	0	0	0	0
□	B1WOF11	0	0	-10	0	-10	0
△	B1WOF11	0	0	-20	0	-20	0
◇	B1WOF11	0	0	-30	0	-30	0



f. CY versus α
Figure 40. Continued.

TEST CENTER NSRDC TEST 7

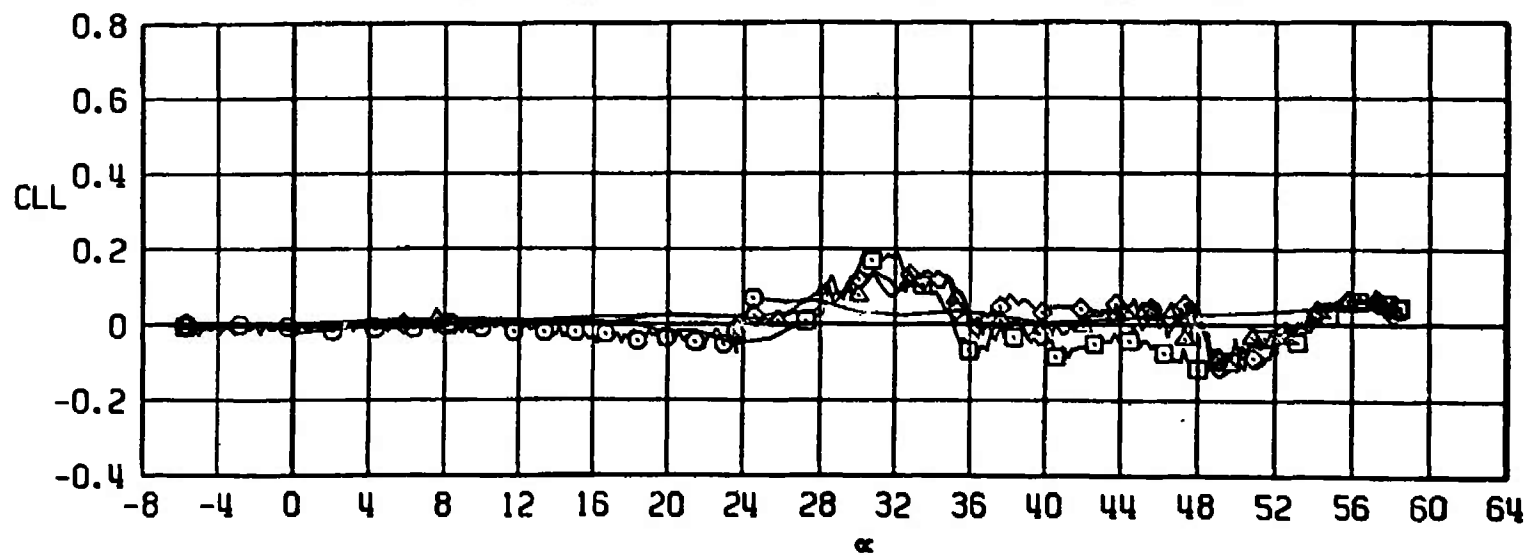
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



g. CLN versus α
Figure 40. Continued.

TEST CENTER NSRDC TEST 7

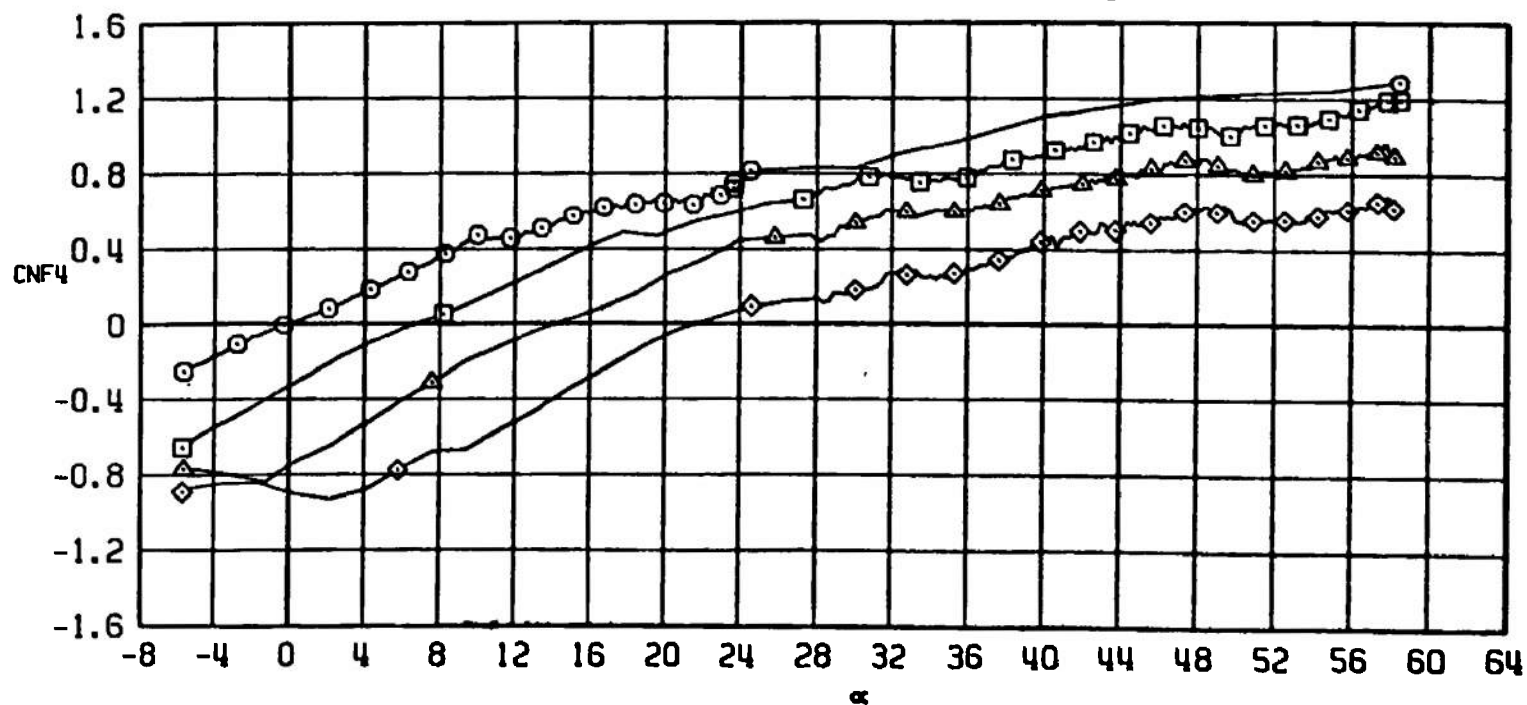
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



h. CLL versus α
Figure 40. Continued.

TEST CENTER NSRDC TEST 7

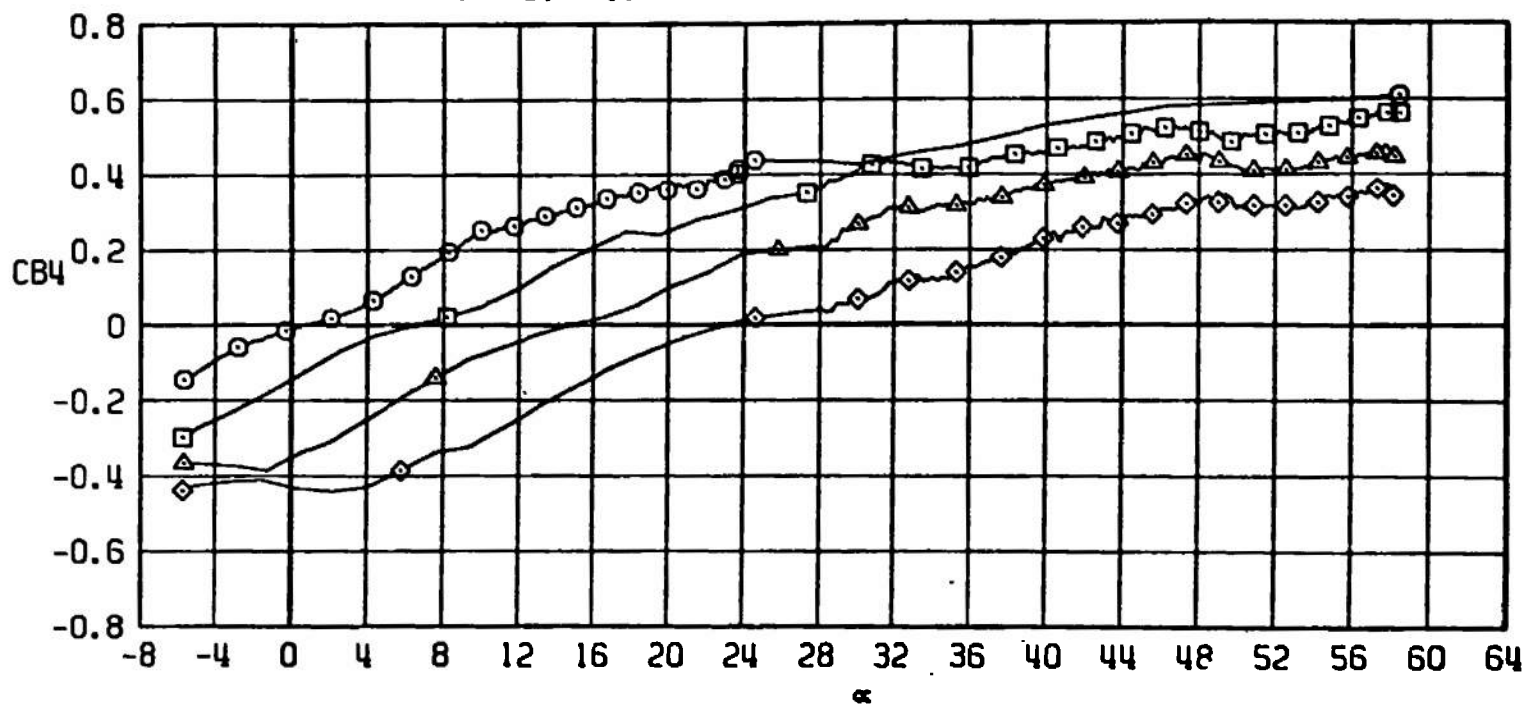
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 40. Continued.

TEST CENTER NSRDC TEST 7

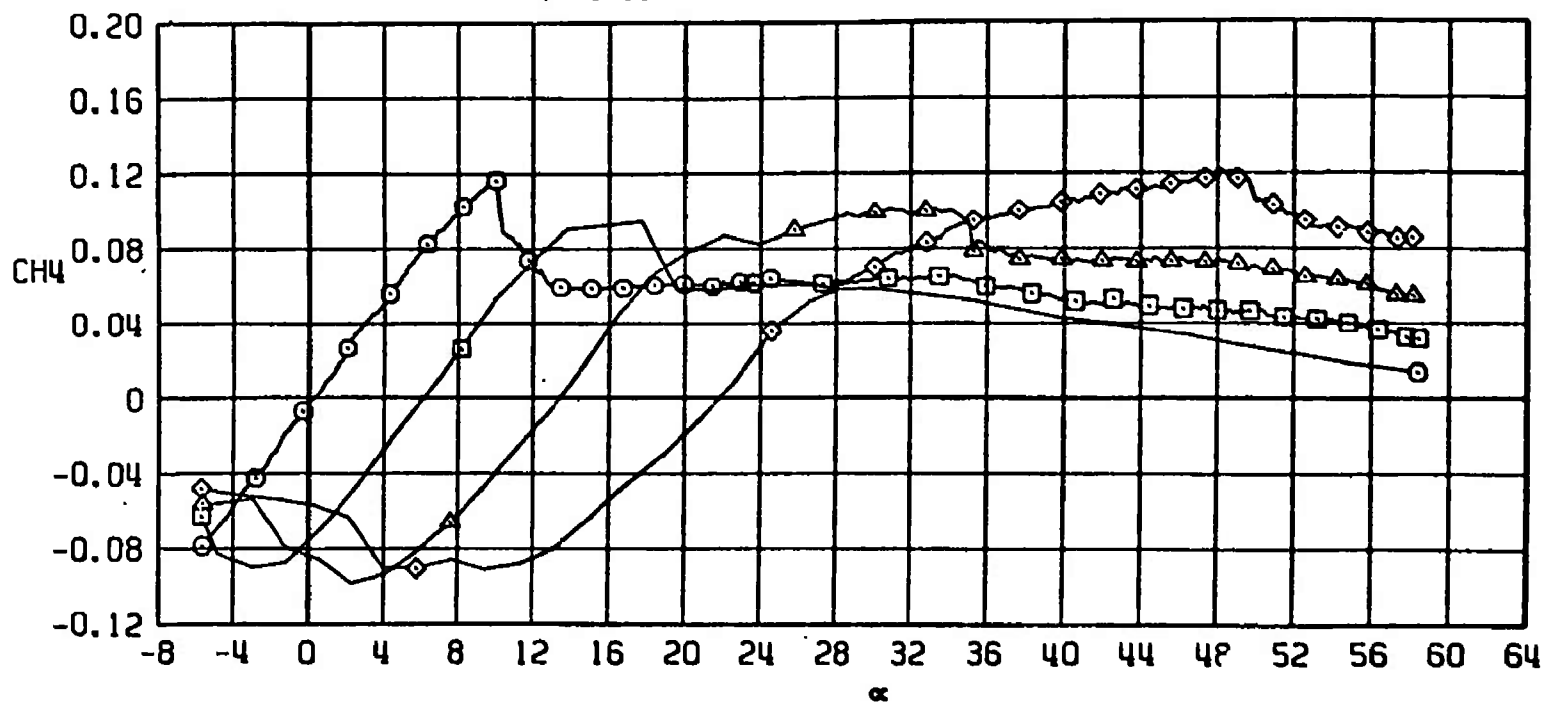
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



j. CB4 versus α
Figure 40. Continued.

TEST CENTER NSROC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF11	0	0	0	0	0	0
□	B1WOF11	0	0	-10	0	-10	0
△	B1WOF11	0	0	-20	0	-20	0
◇	B1WOF11	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 40. Concluded.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF11	0	0	0	0	0	0
□	B1WOF11	0	0	-10	0	-10	0
△	B1WOF11	0	0	-20	0	-20	0
◇	B1WOF11	0	0	-30	0	-30	0

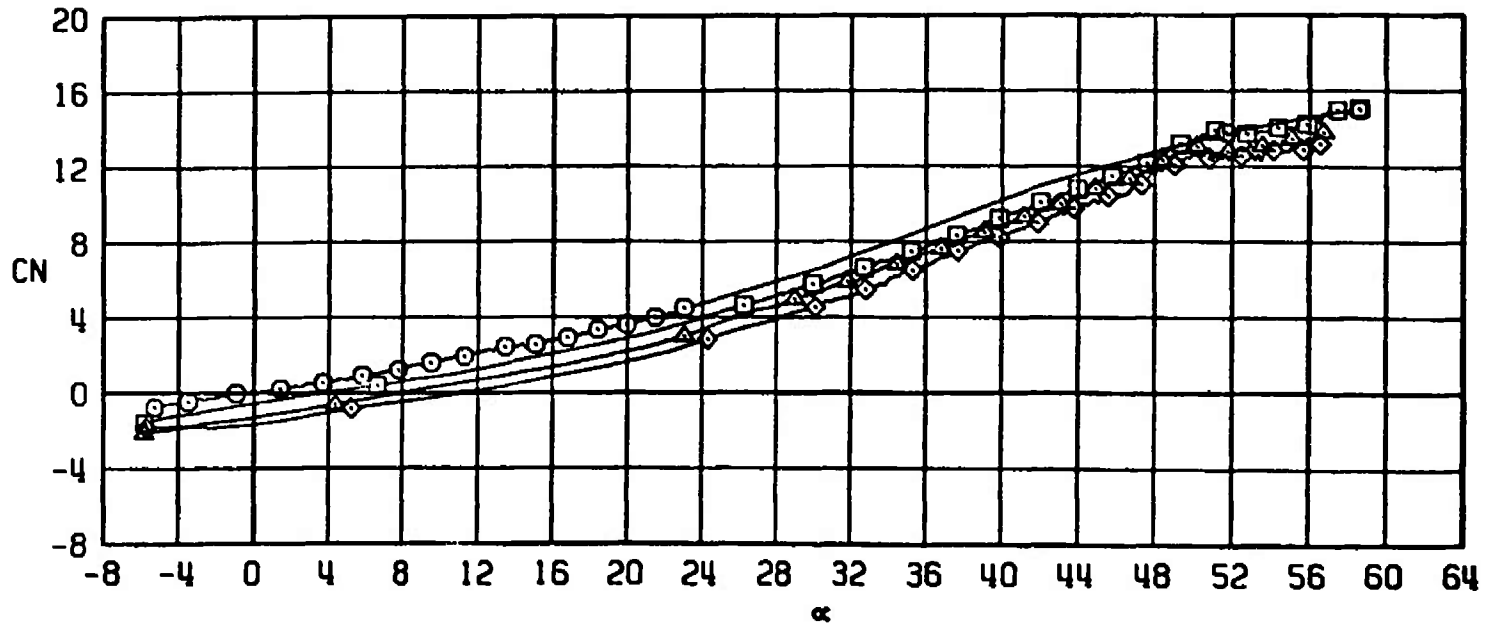
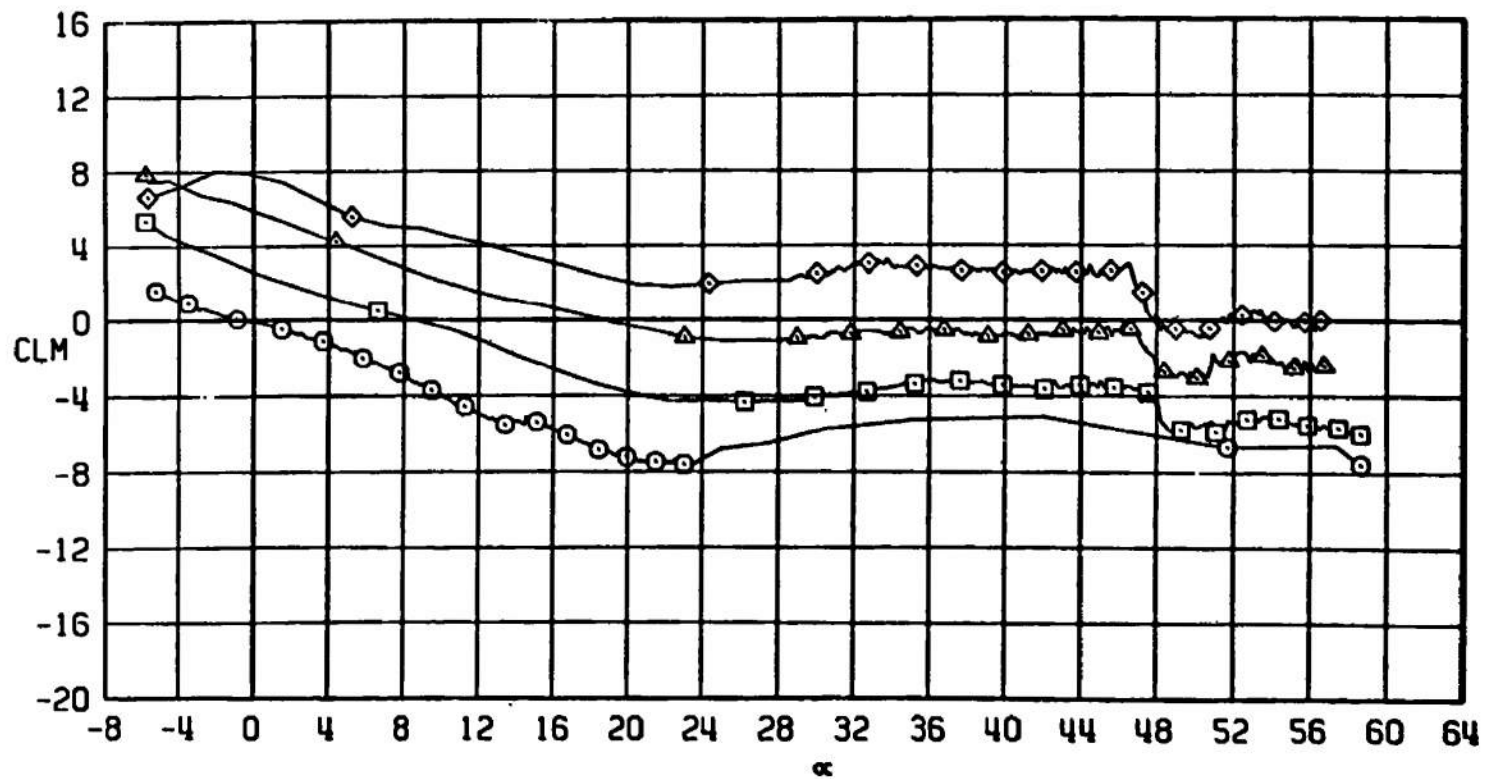
a. C_N versus α

Figure 41. Test No. 7, comparison of aerodynamic coefficients of configuration B1WOF11 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.0$.

TEST CENTER NSRDC TEST 7

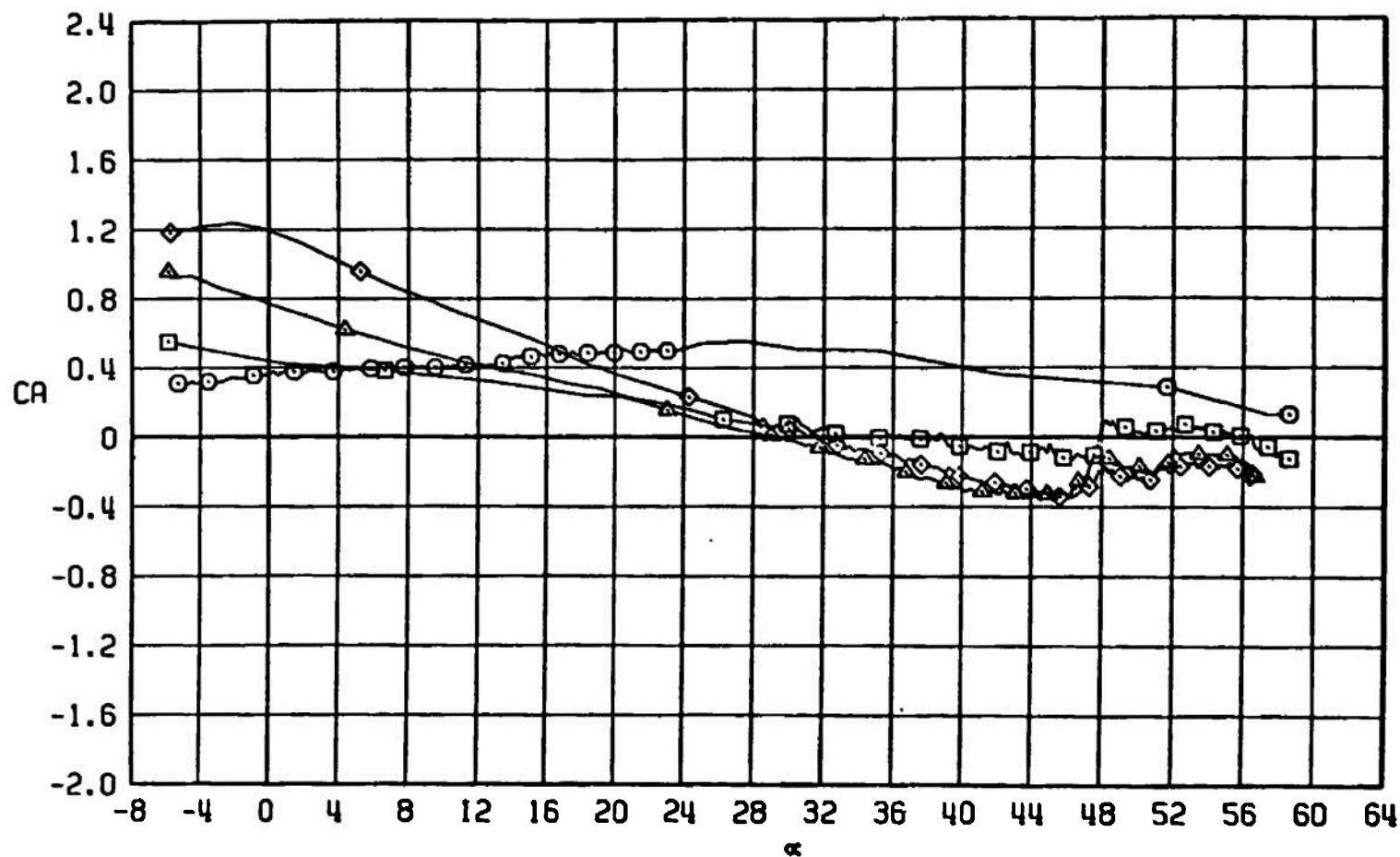
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



b. CLM versus α
Figure 41. Continued.

TEST CENTER NSRDC TEST 7

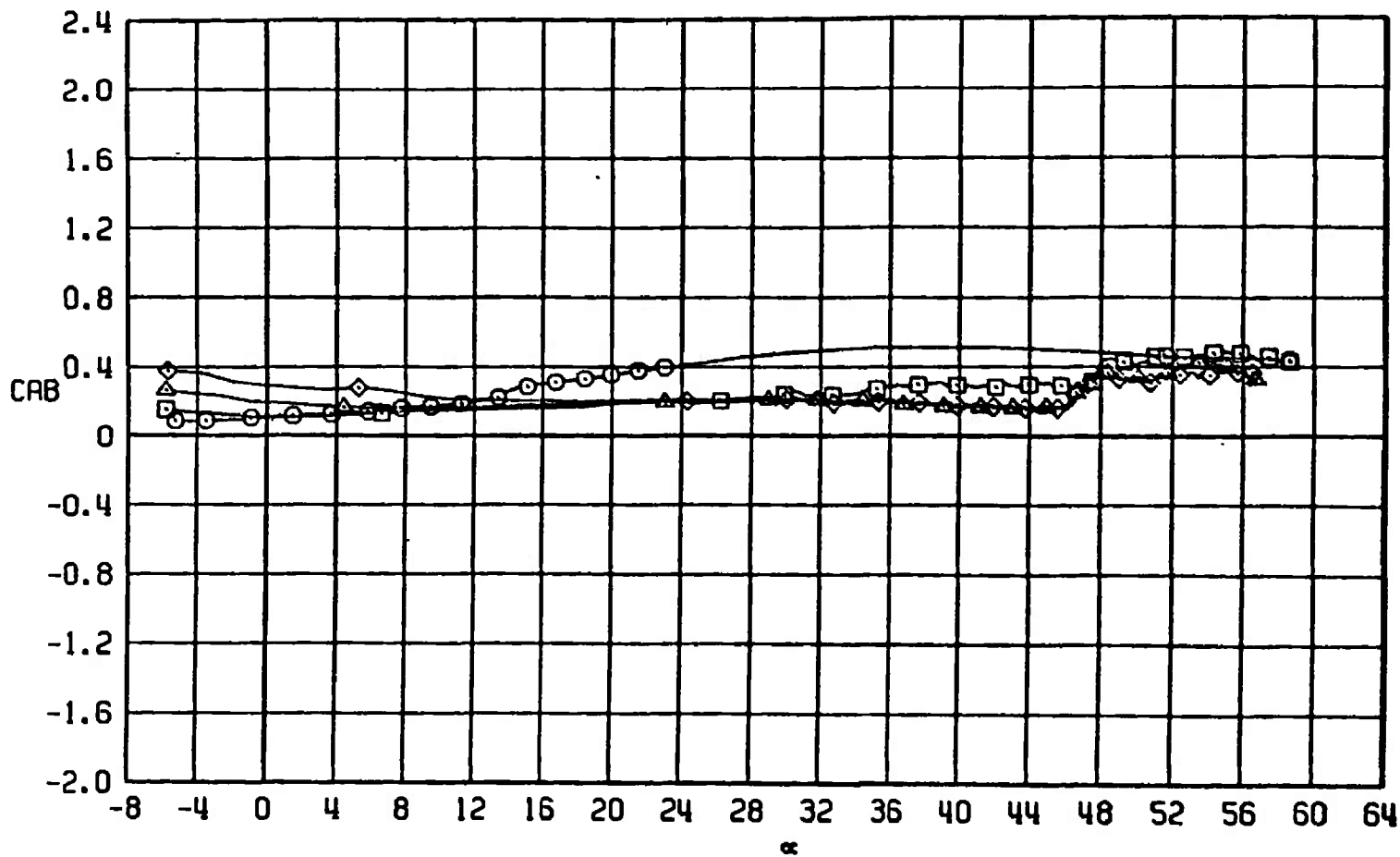
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



c. CA versus α
Figure 41. Continued.

TEST CENTER NSRDC TEST 7

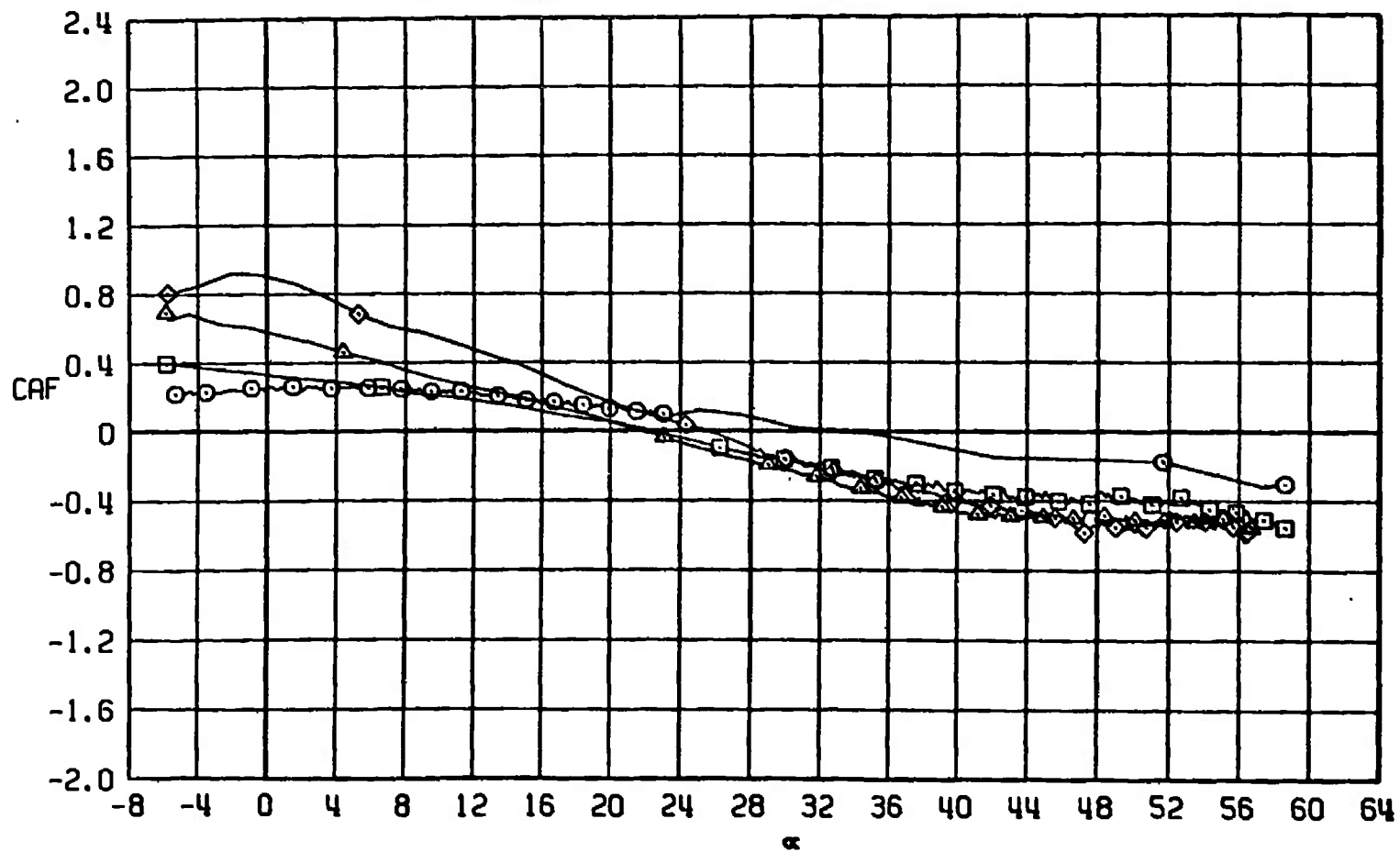
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF11	0	0	0	0	0	0
□	B1WOF11	0	0	-10	0	-10	0
△	B1WOF11	0	0	-20	0	-20	0
◇	B1WOF11	0	0	-30	0	-30	0



d. CAB versus α
Figure 41. Continued.

TEST CENTER NSRDC TEST 7

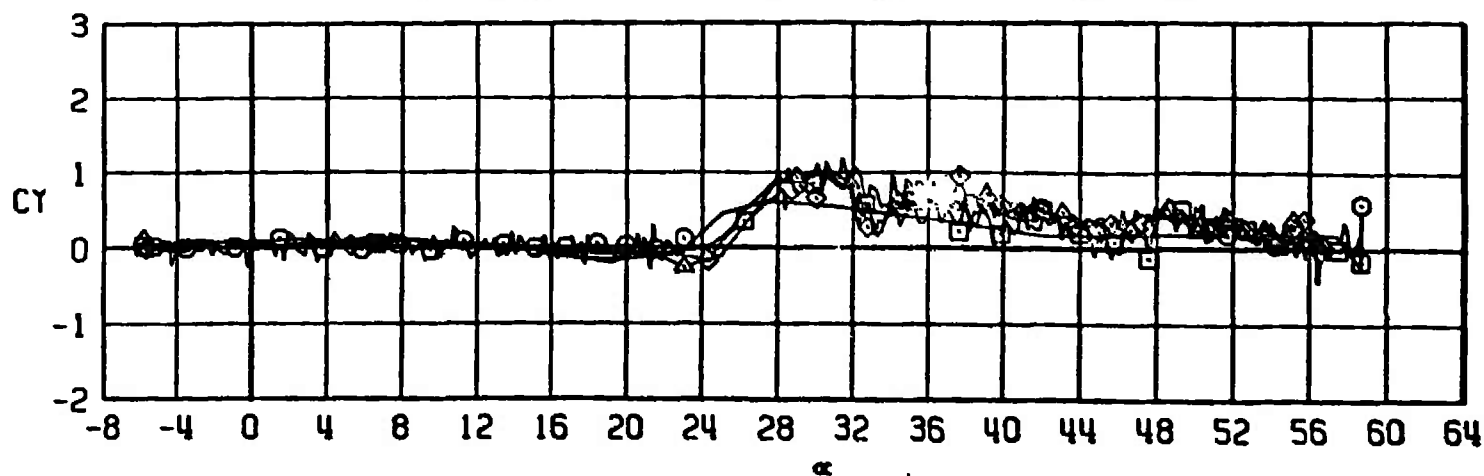
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



e. CAF versus α
Figure 41. Continued.

TEST CENTER NSRDC TEST 7

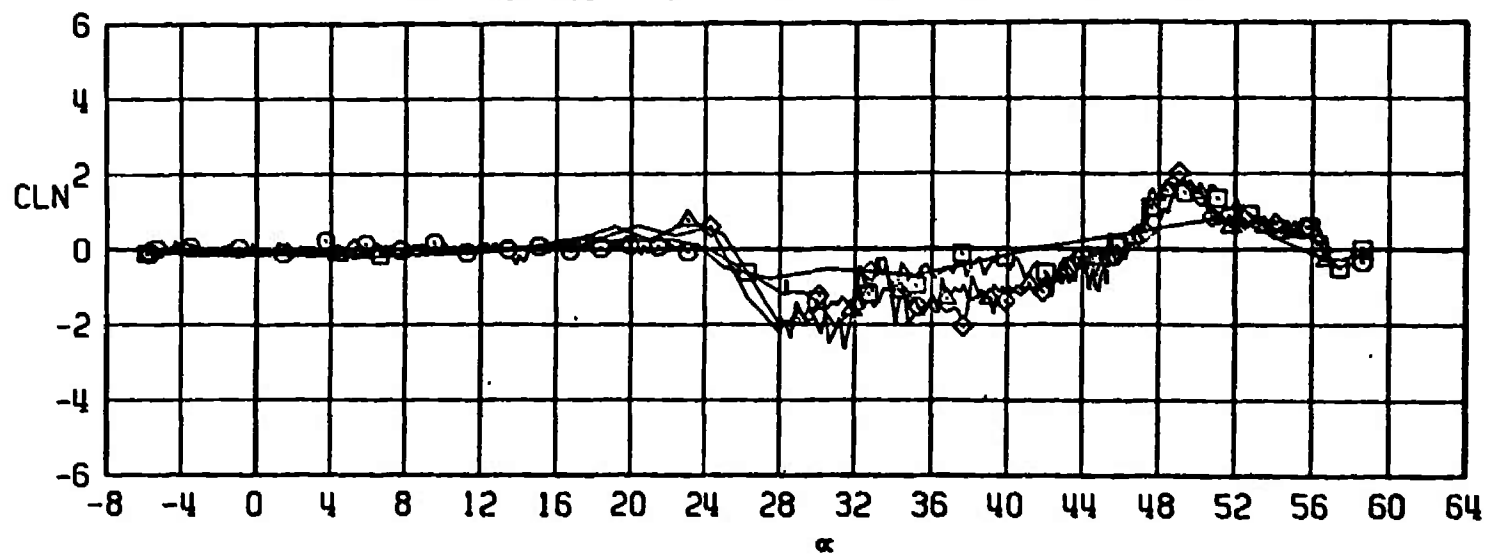
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



f. CY versus α
Figure 41. Continued.

TEST CENTER NSRDC TEST 7

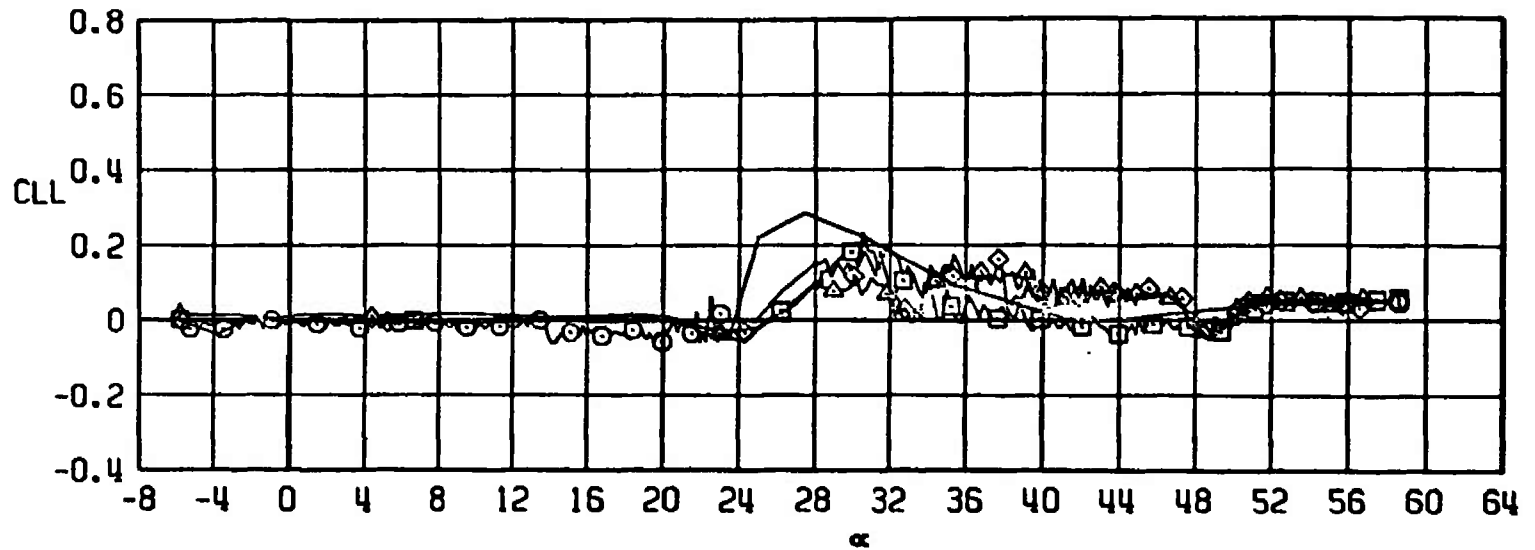
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



g. CLN versus α
Figure 41. Continued.

TEST CENTER NSROC TEST 7

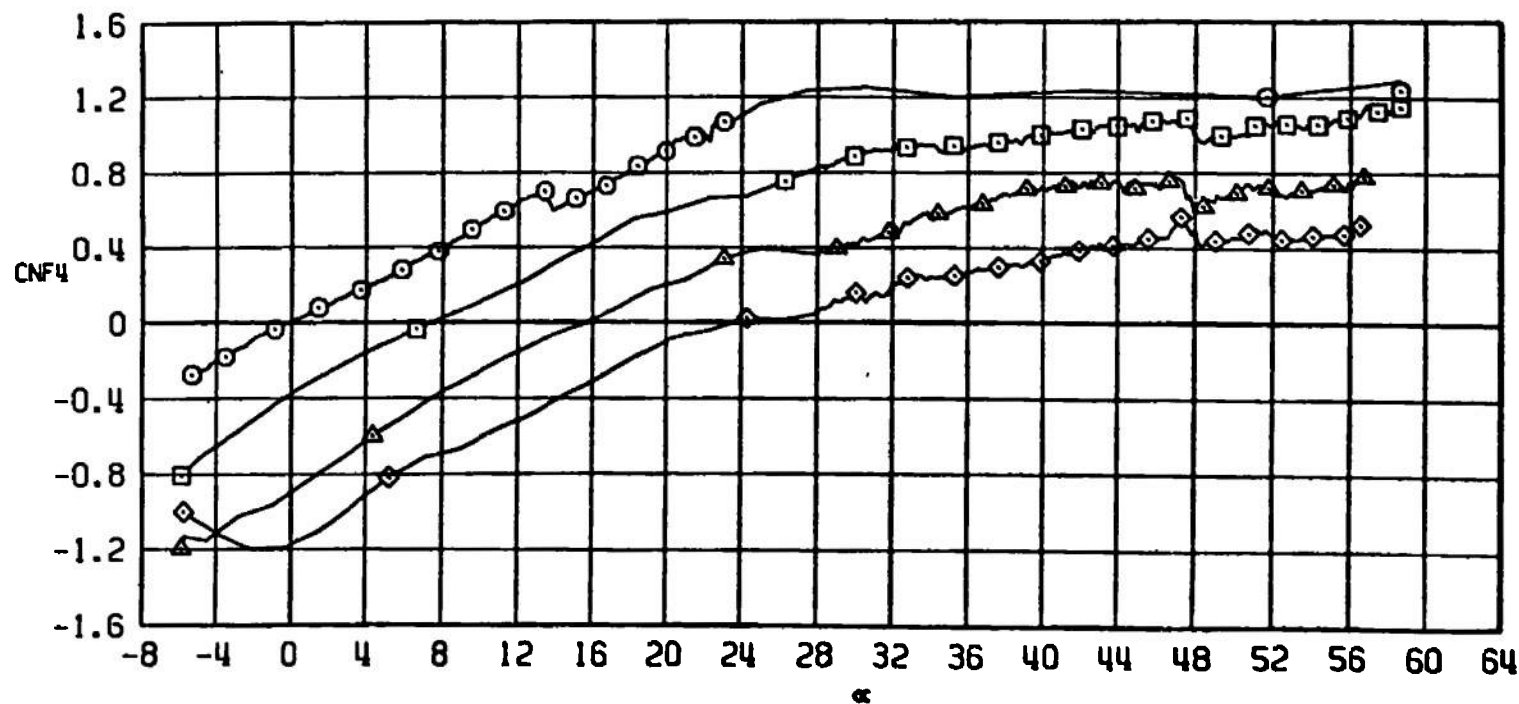
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



h. CLL versus α
Figure 41. Continued.

TEST CENTER NSRDC TEST 7

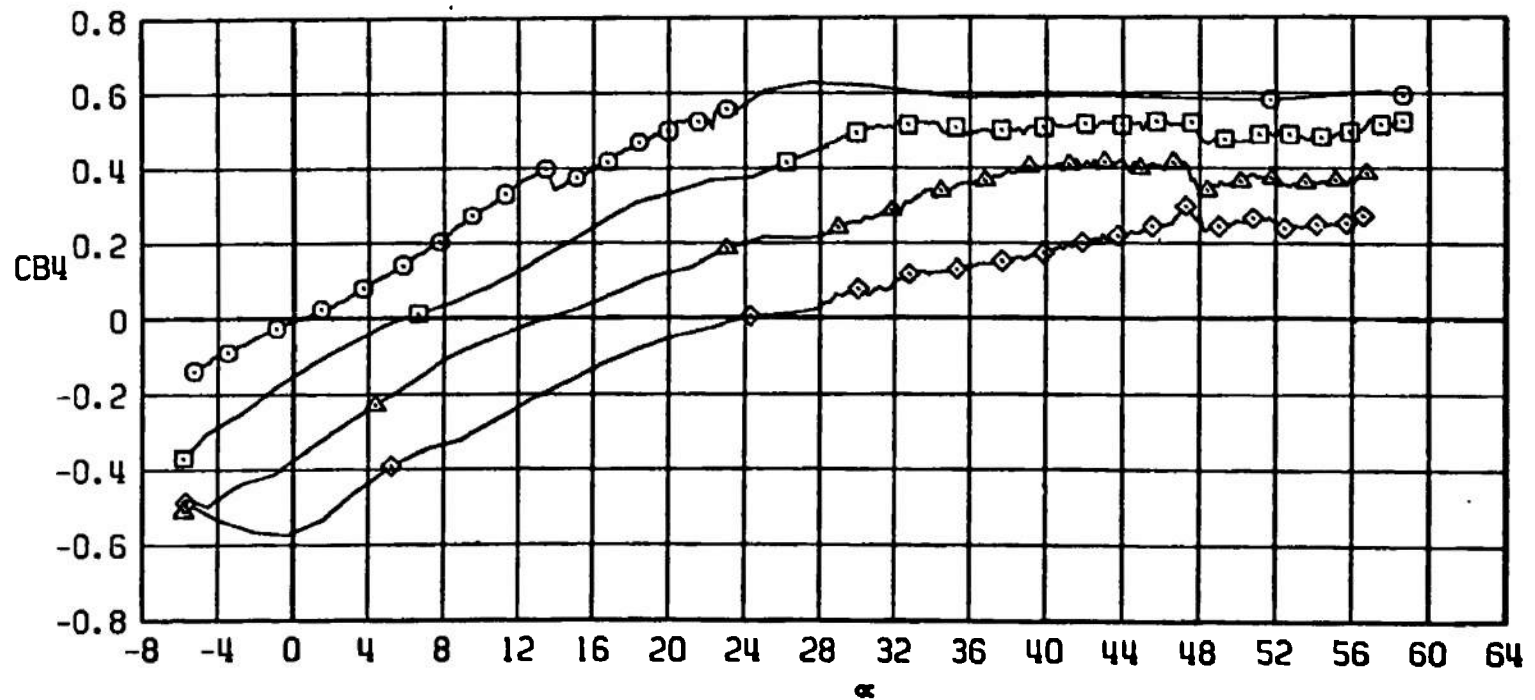
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 41. Continued.

TEST CENTER NSRDC TEST 7

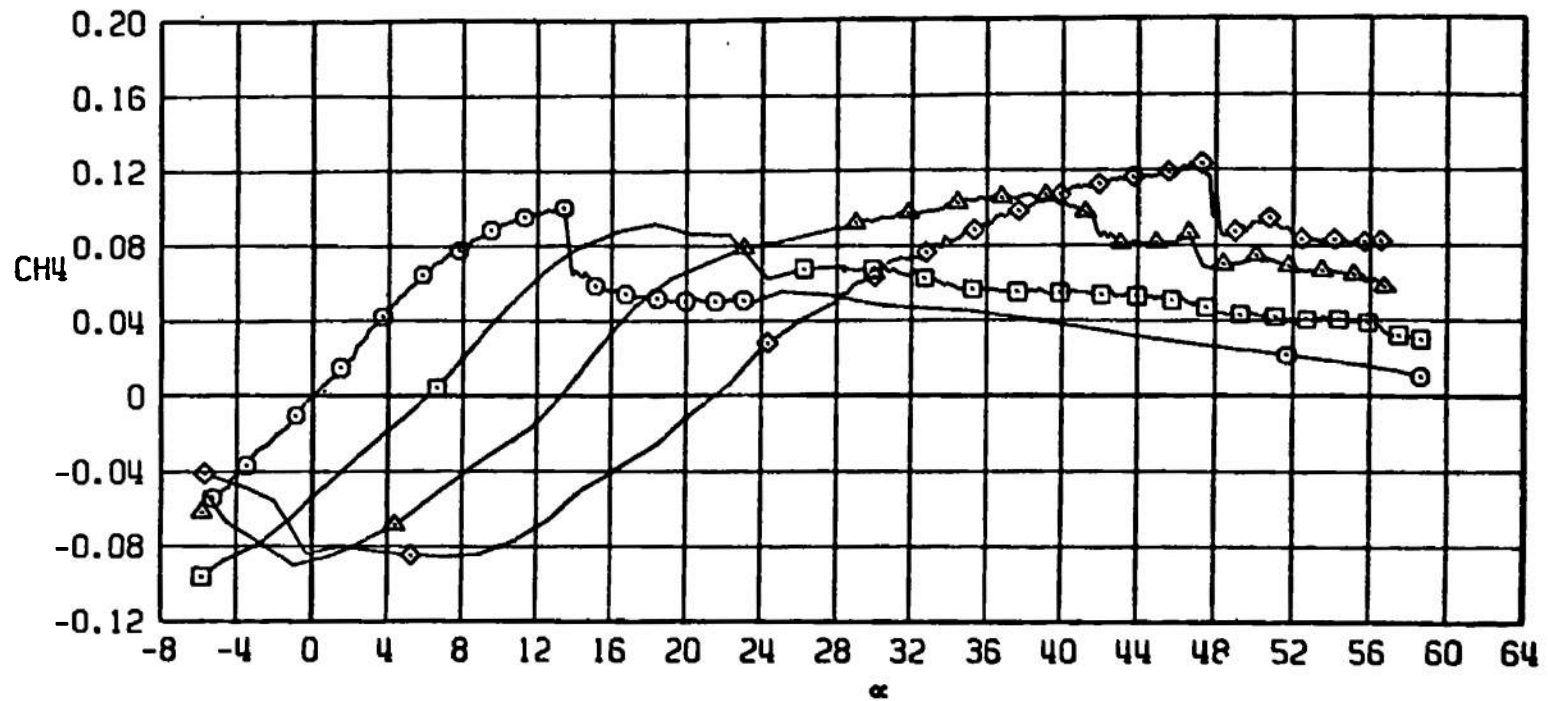
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



j. CB4 versus α
Figure 41. Continued.

TEST CENTER NSRDC TEST 7

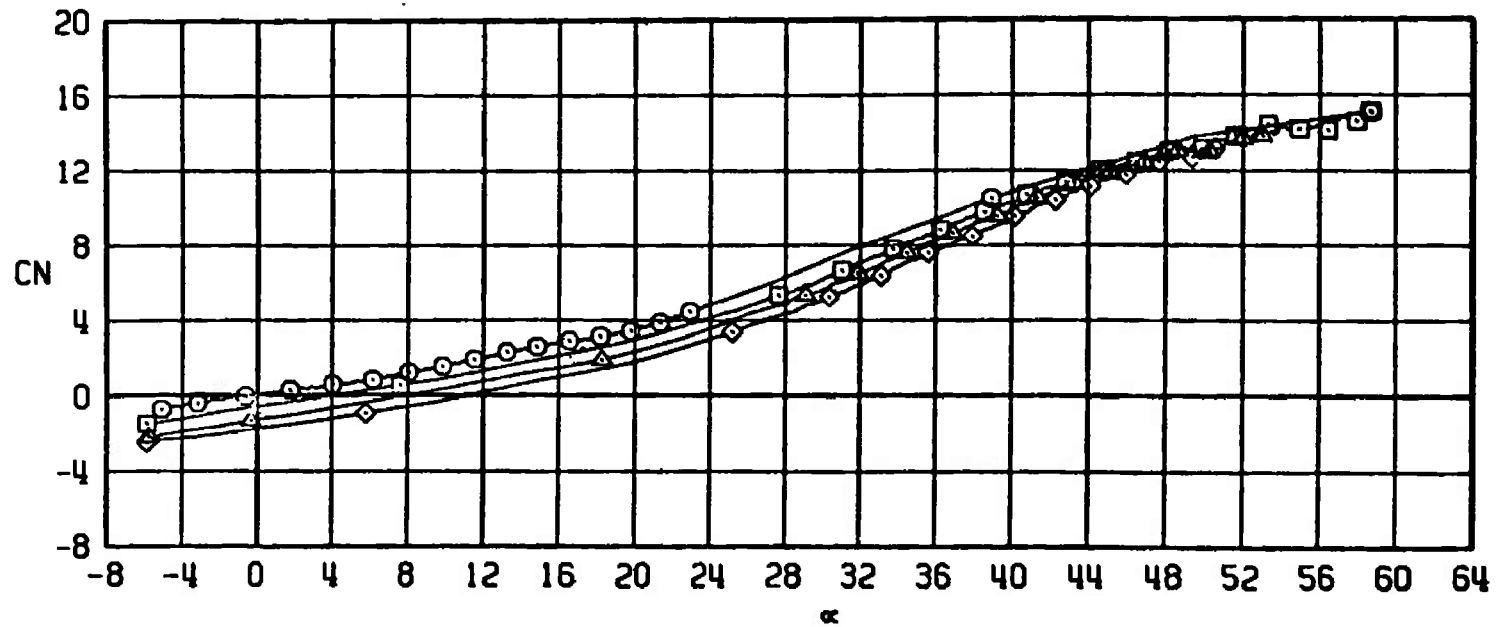
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 41. Concluded.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F11	0	0	0	0	0	0
□	B1W0F11	0	0	-10	0	-10	0
△	B1W0F11	0	0	-20	0	-20	0
◇	B1W0F11	0	0	-30	0	-30	0

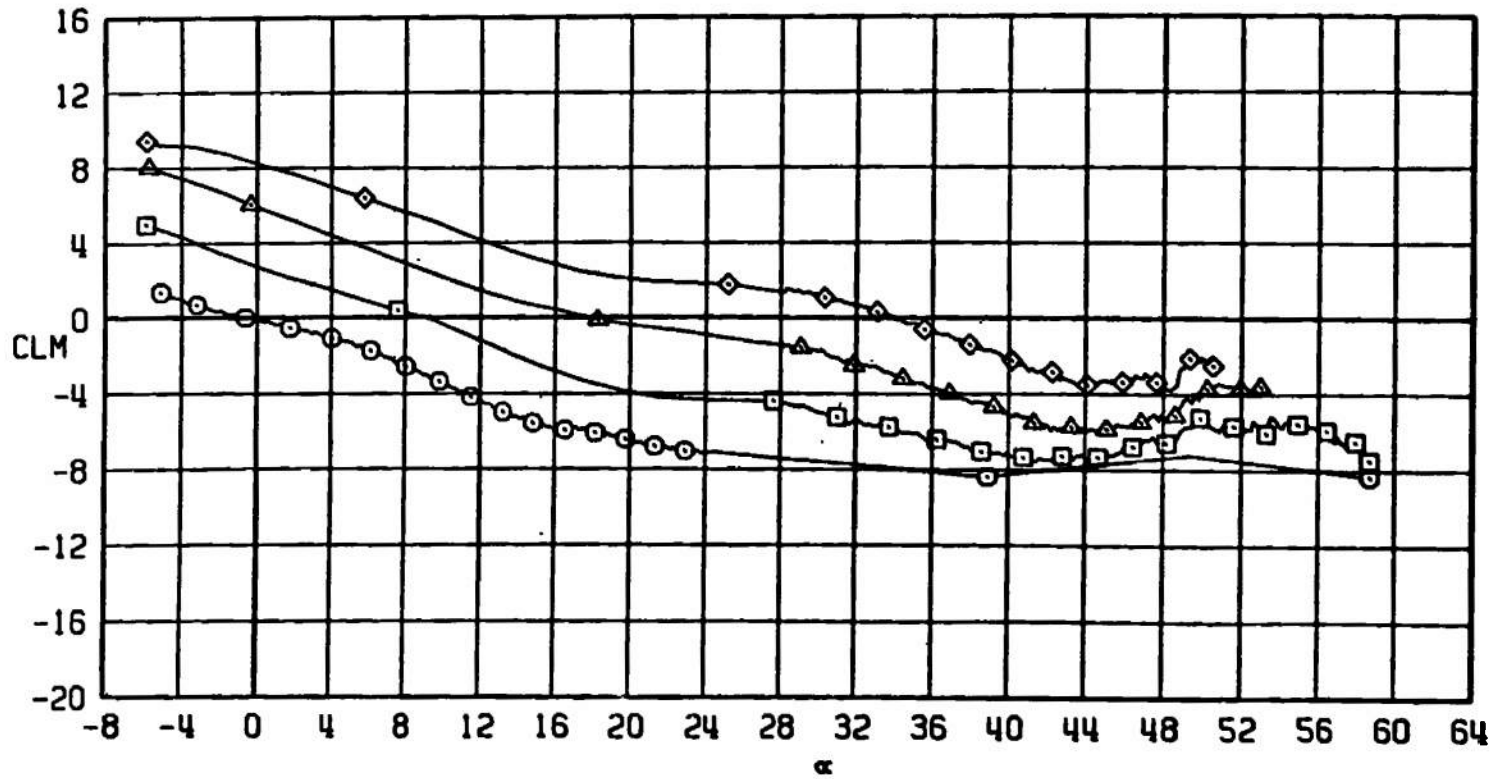


a. CN versus α

Figure 42. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F11 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.1$.

TEST CENTER NSRDC TEST 7

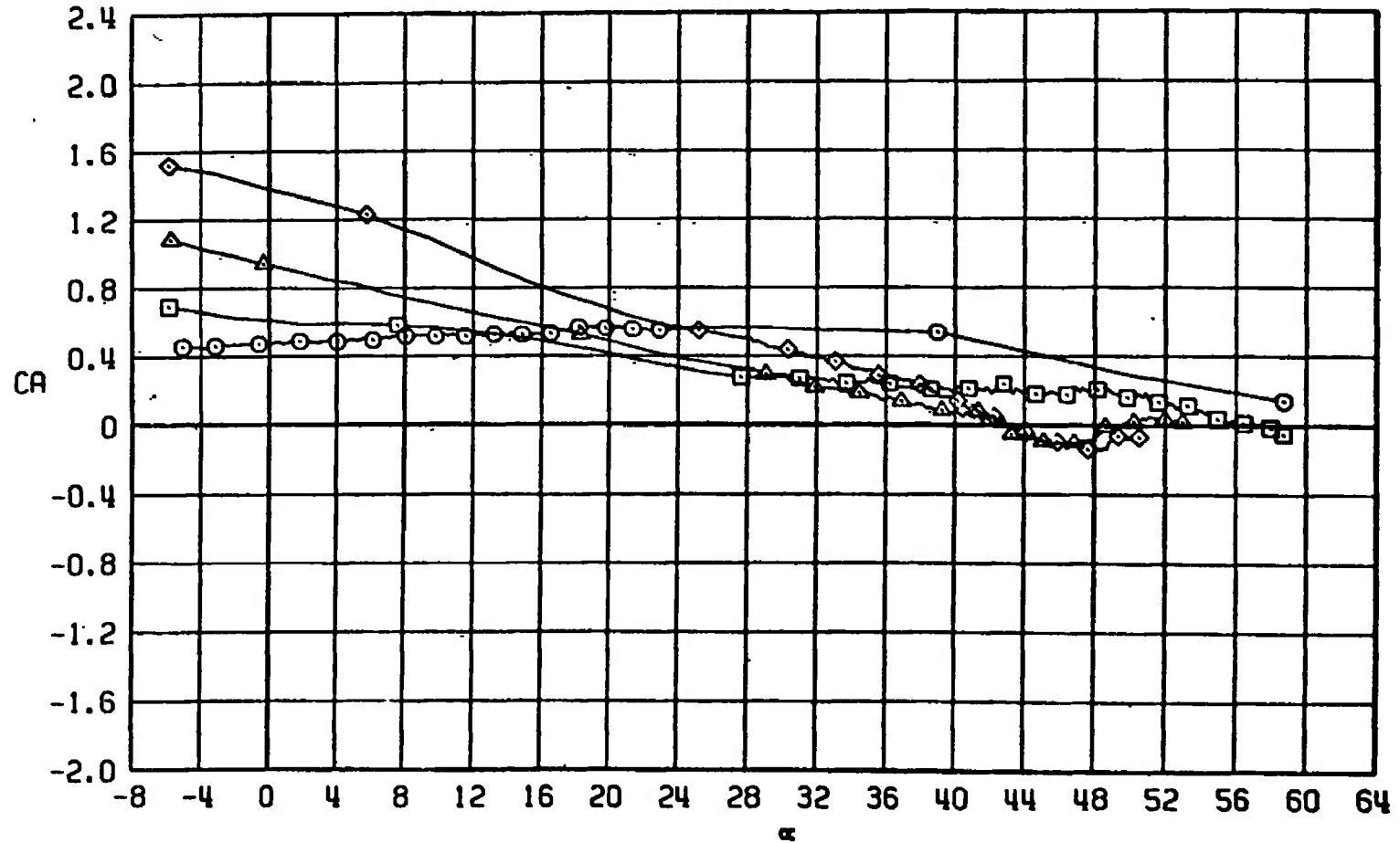
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



b. CLM versus α
Figure 42. Continued.

TEST CENTER NSRDC TEST 7

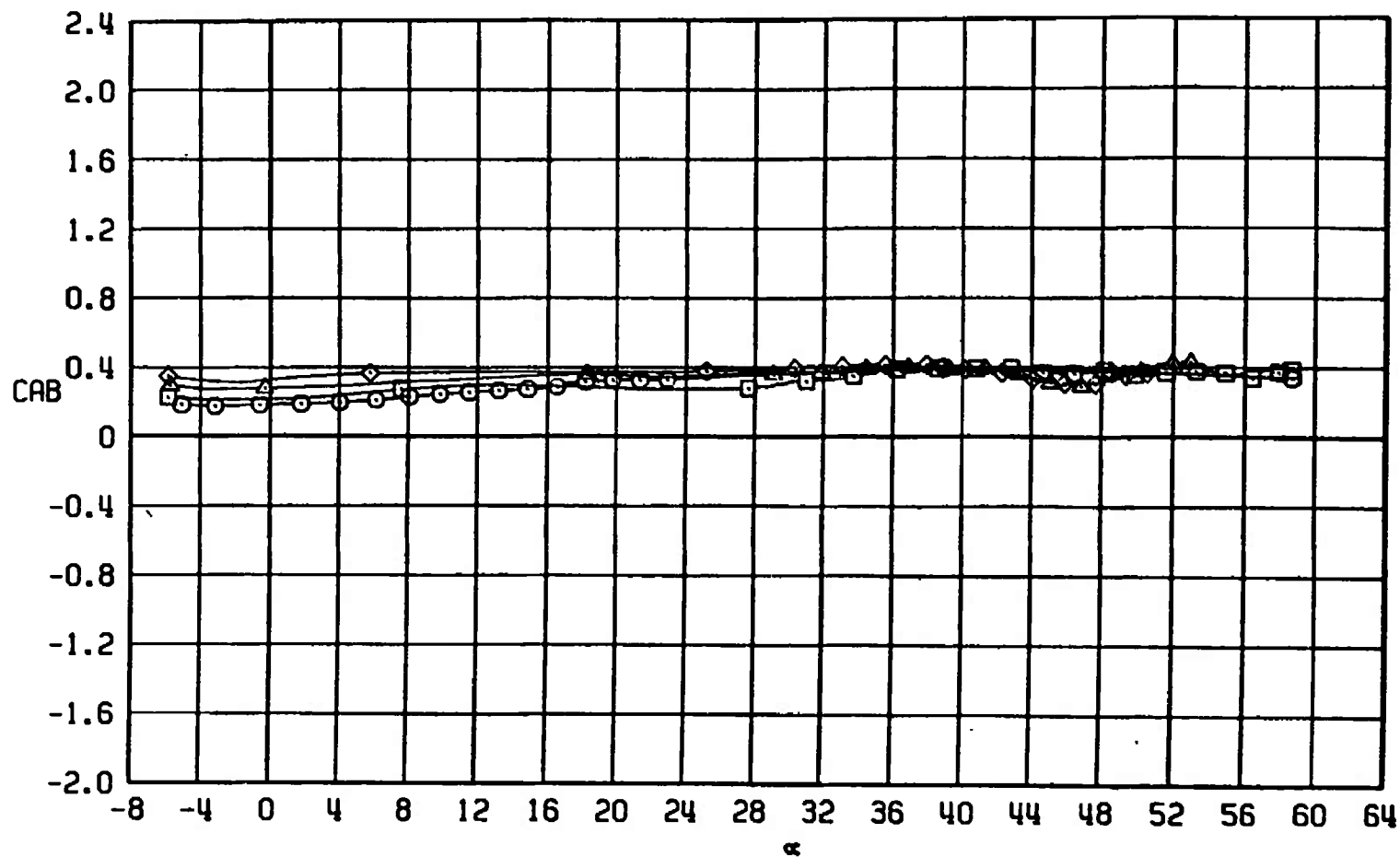
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



c. CA versus α
Figure 42. Continued.

TEST CENTER NSRDC TEST 7

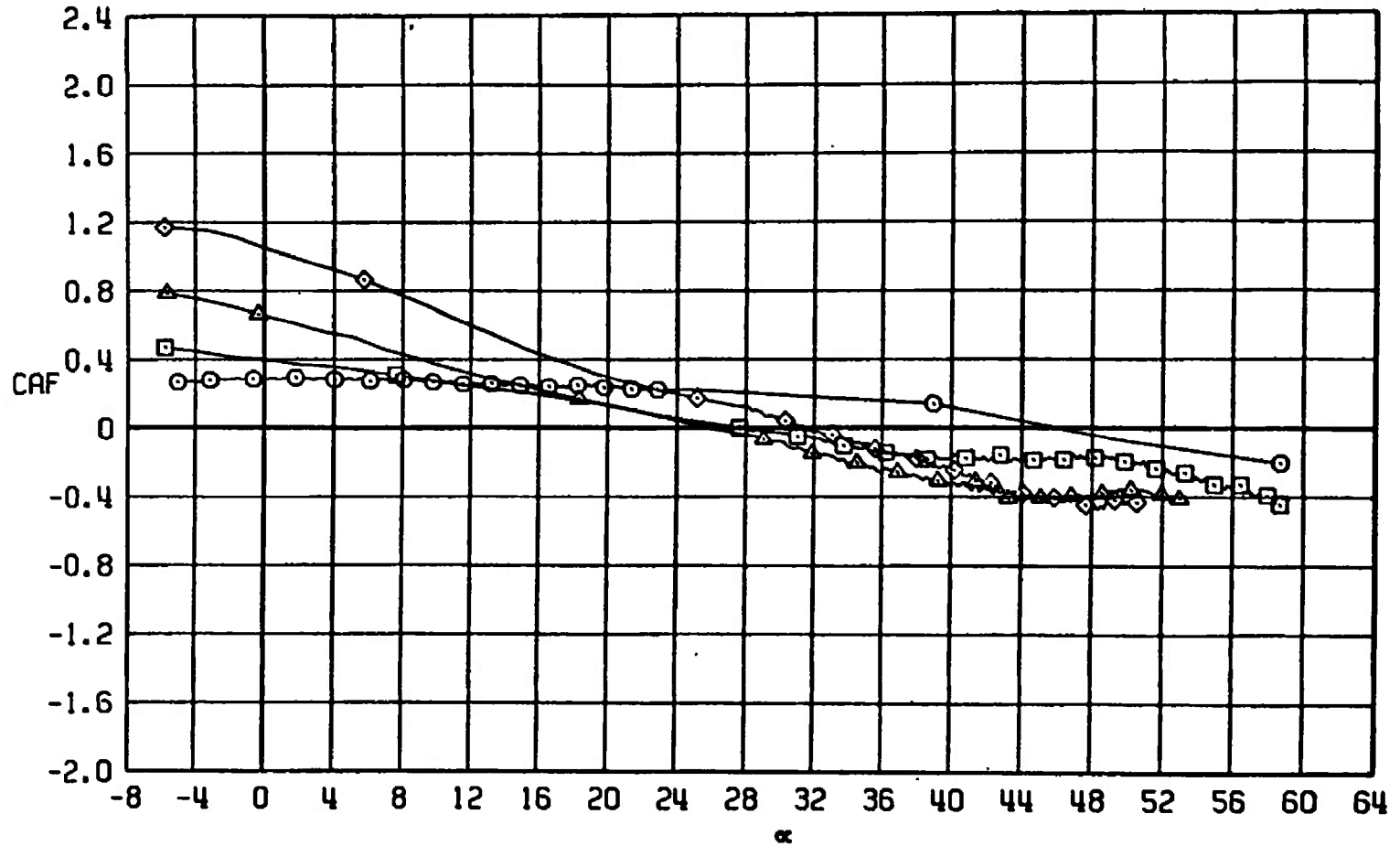
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



d. CAB versus α
Figure 42. Continued.

TEST CENTER NSRDC TEST 7

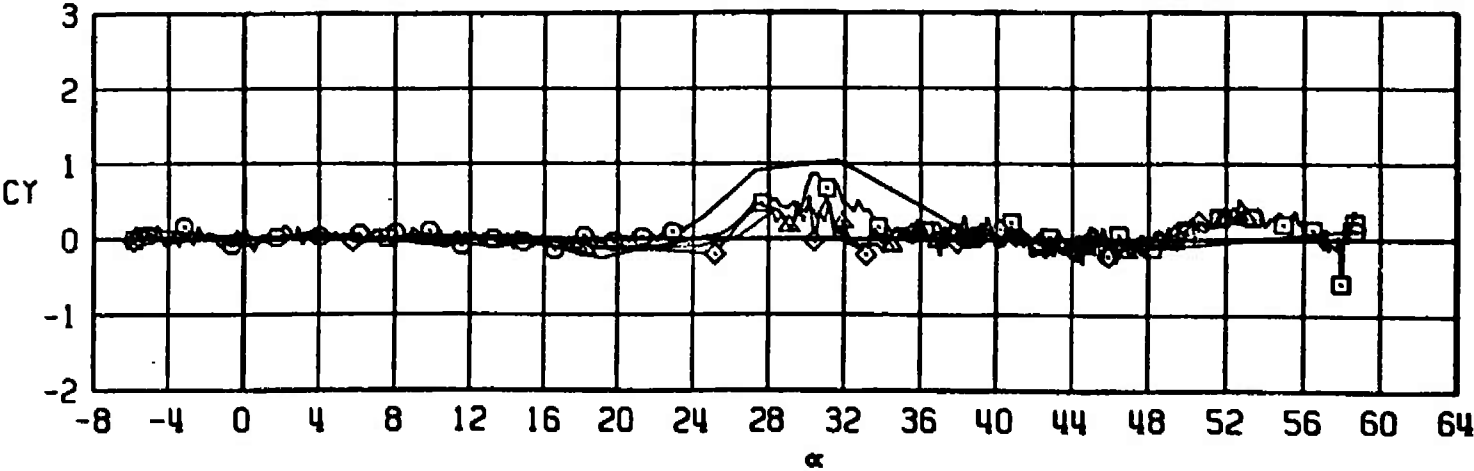
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



e. CAF versus α
Figure 42. Continued.

TEST CENTER NSROC TEST 7

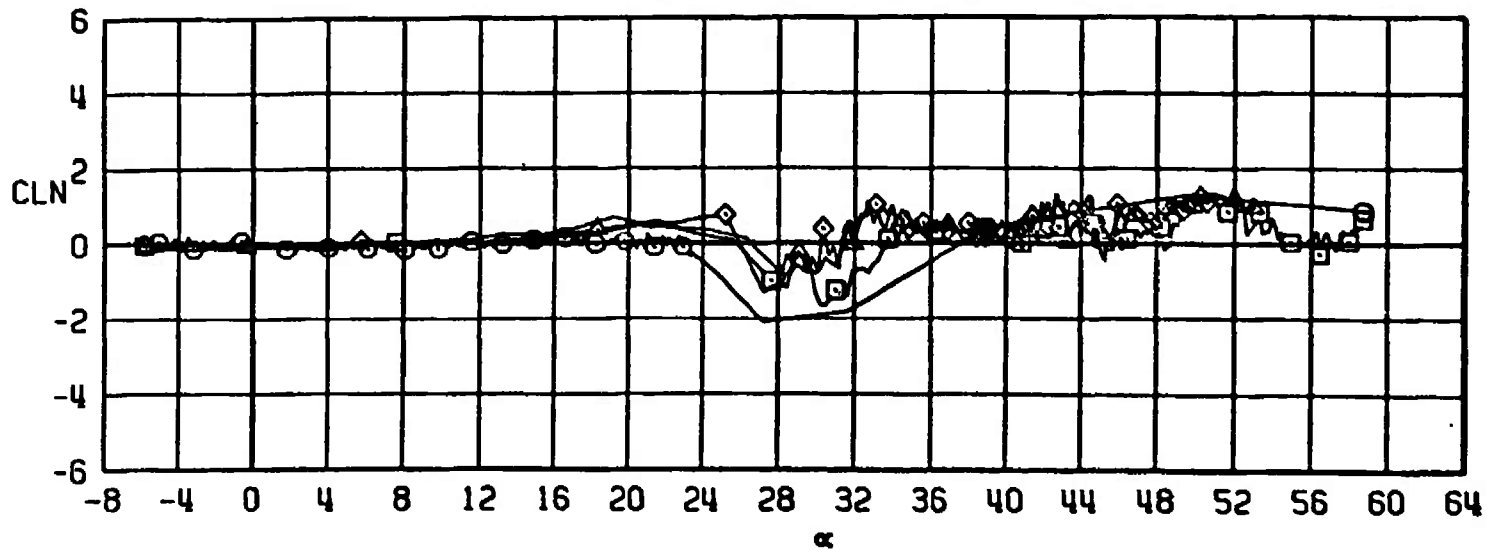
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



f. CY versus α
Figure 42. Continued.

TEST CENTER NSRDC TEST 7

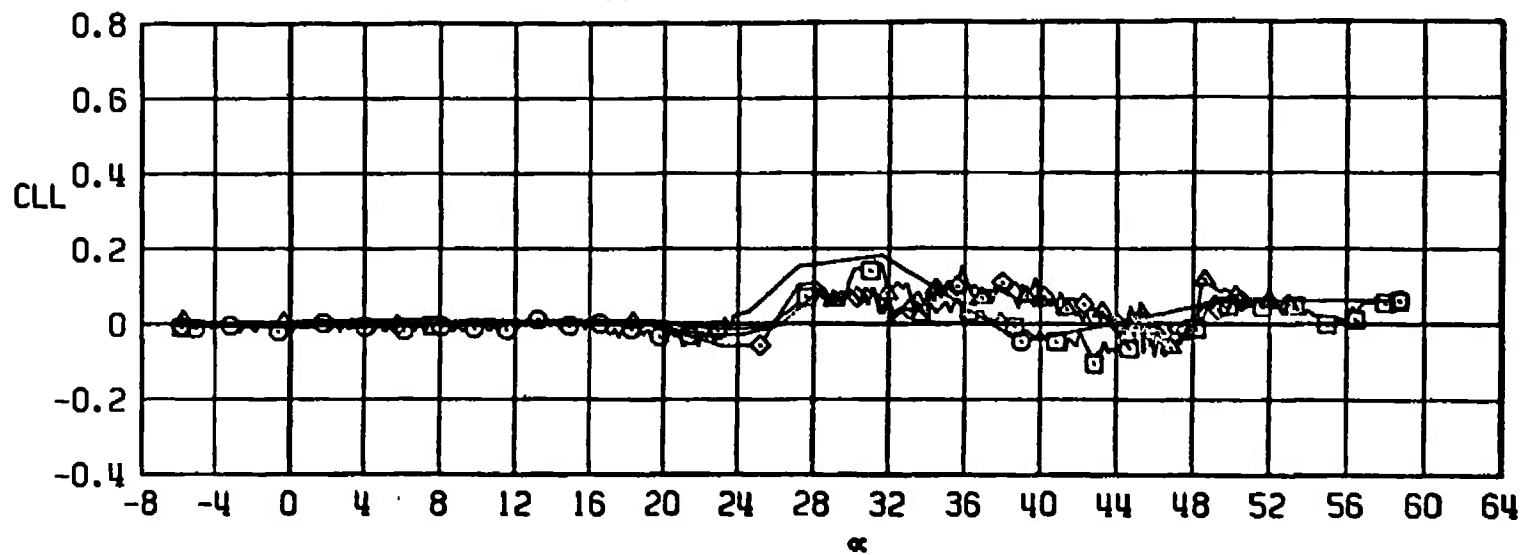
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



g. CLN versus α
Figure 42. Continued.

TEST CENTER NSRDC TEST 7

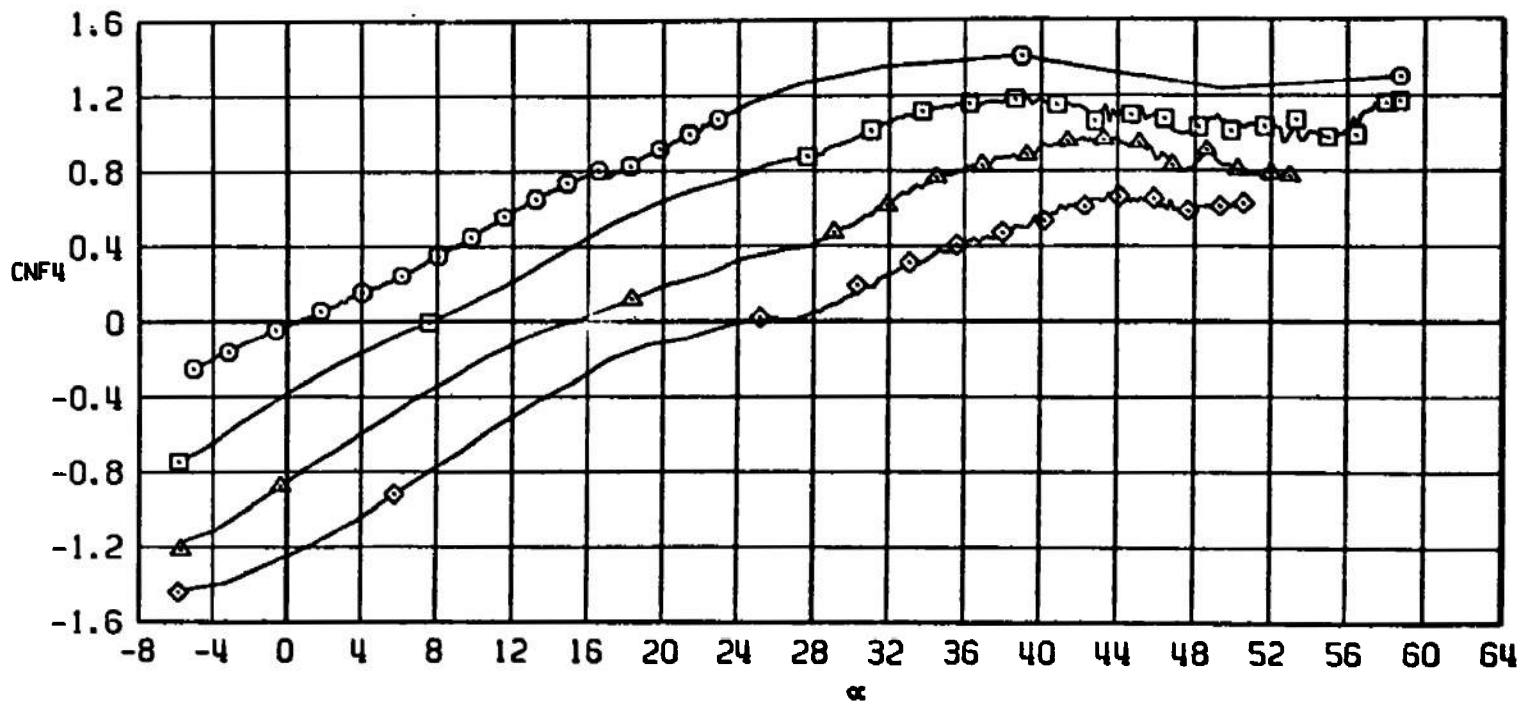
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



h. CLL versus α
Figure 42. Continued.

TEST CENTER NSRDC TEST 7

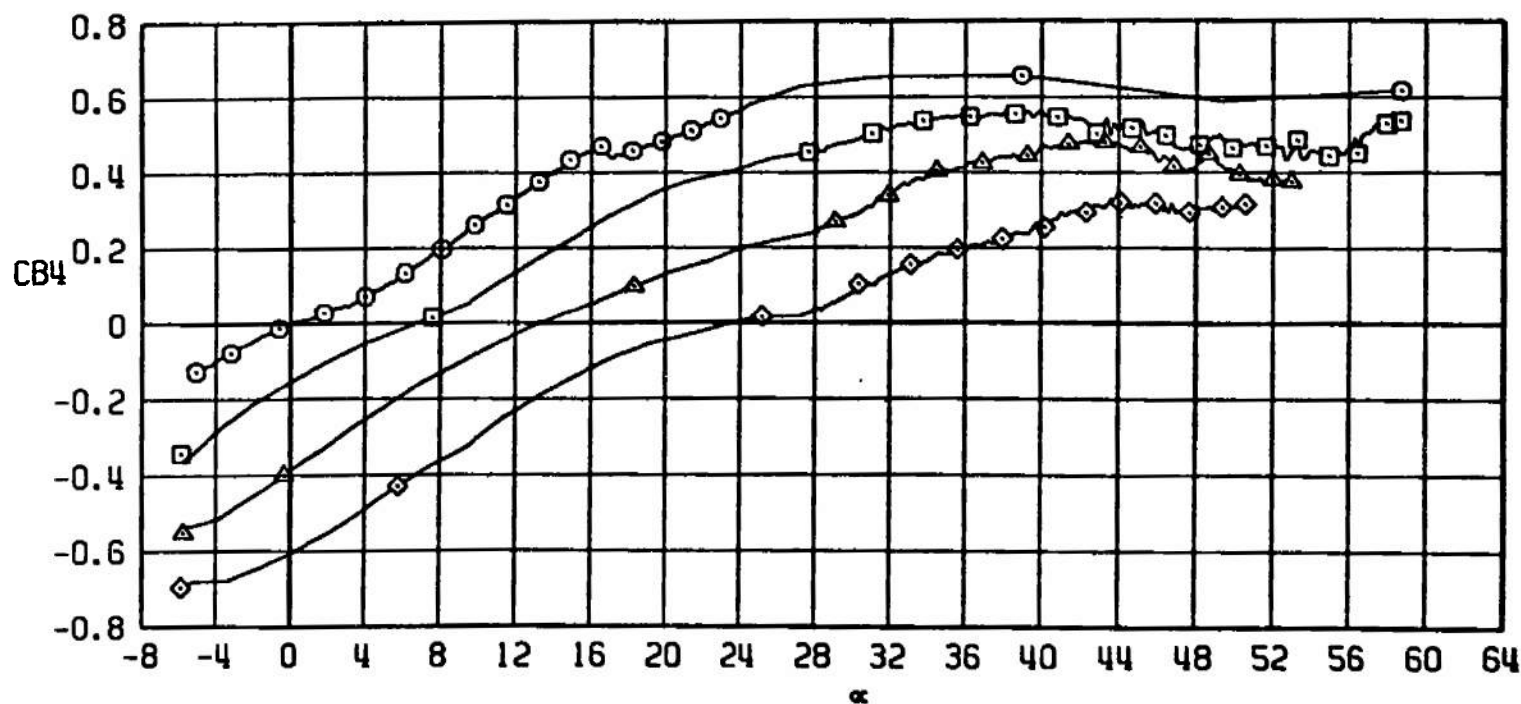
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 42. Continued.

TEST CENTER NSRDC TEST 7

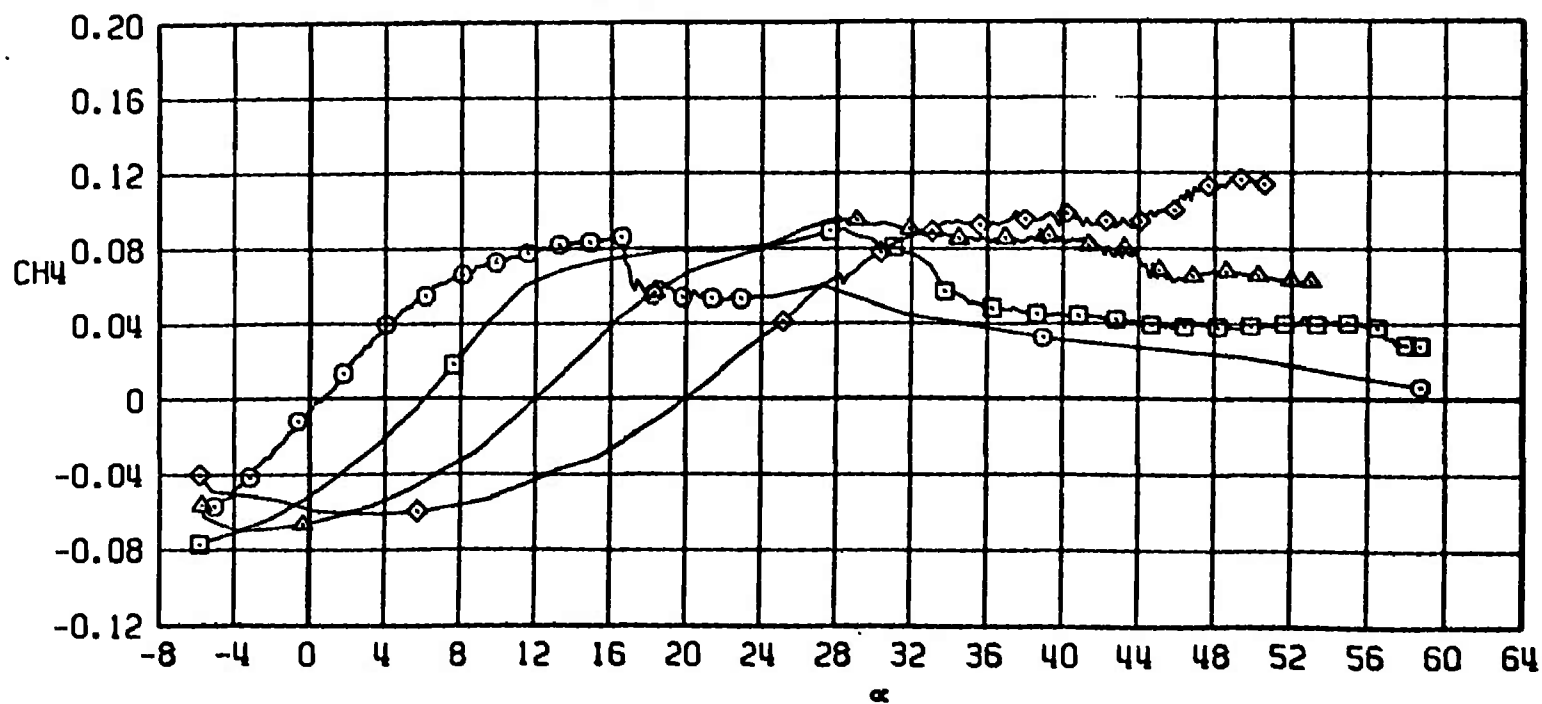
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



j. CB4 versus α
Figure 42. Continued.

TEST CENTER NSROC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF11	0	0	0	0	0	0
□	BIWOF11	0	0	-10	0	-10	0
△	BIWOF11	0	0	-20	0	-20	0
◇	BIWOF11	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 42. Concluded.

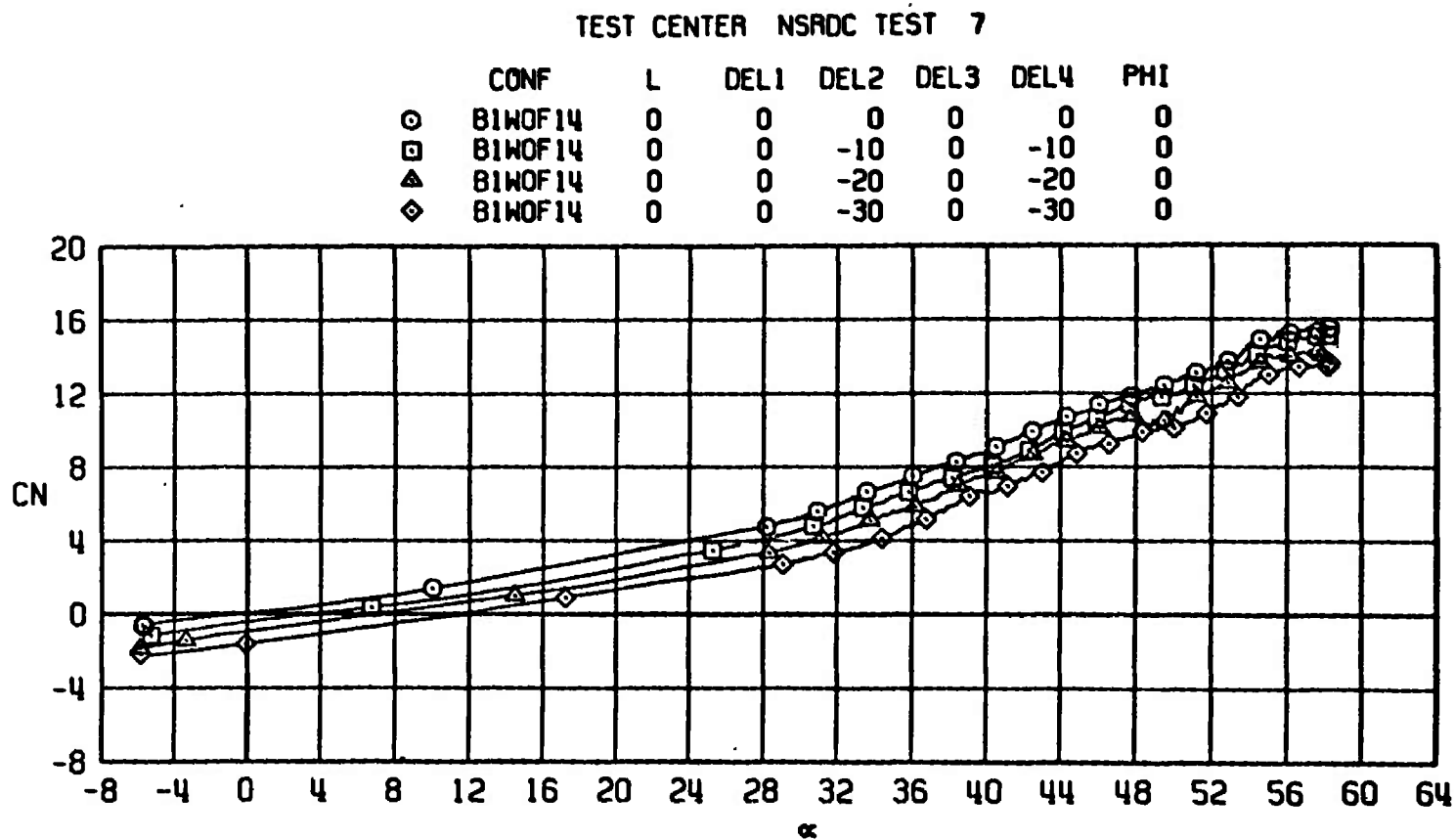
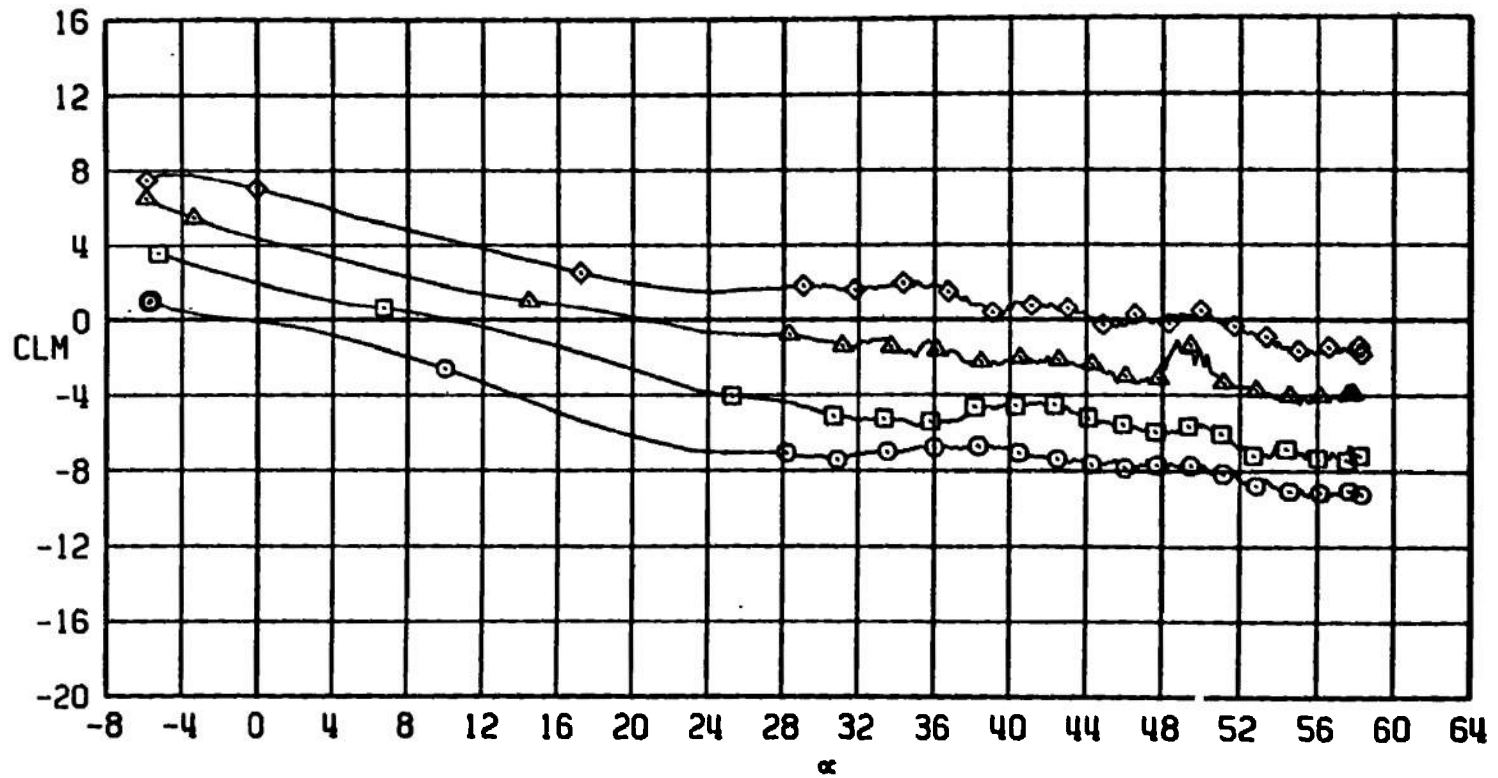
a. CN versus α

Figure 43. Test No. 7, comparison of aerodynamic coefficients of configuration B1WOF14 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.8$.

TEST CENTER NSRDC TEST 7

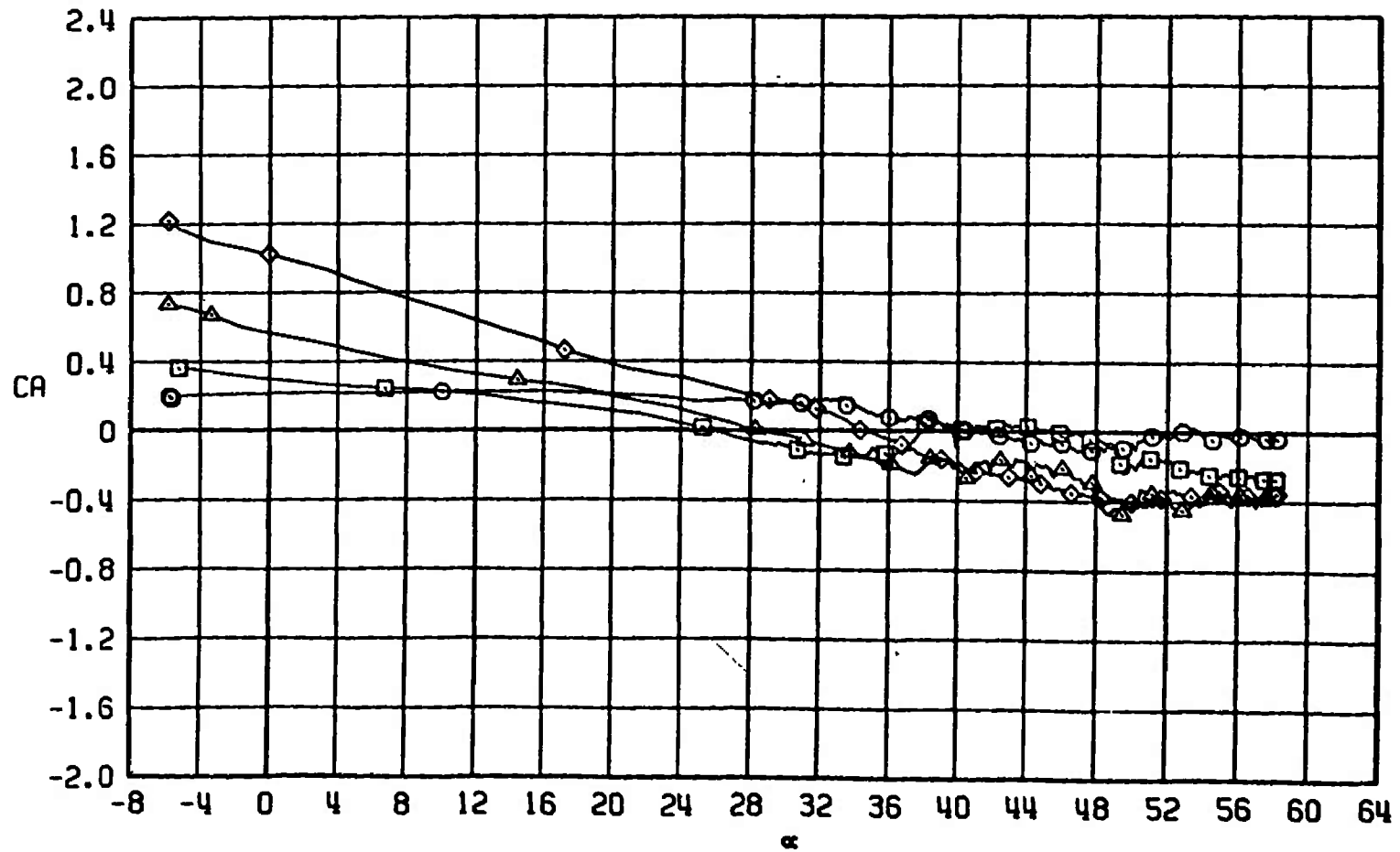
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



b. CLM versus α
Figure 43. Continued.

TEST CENTER NSRDC TEST 7

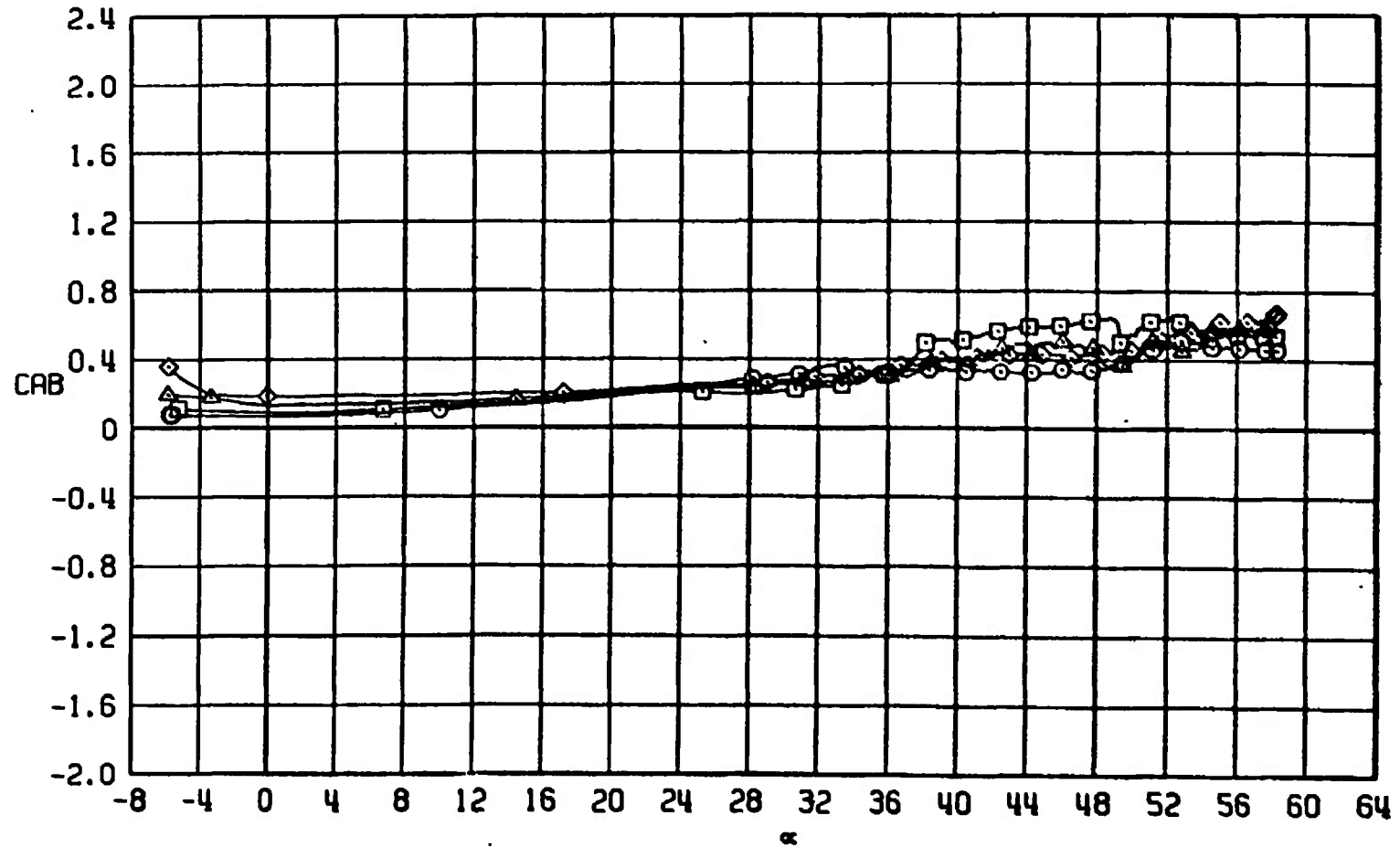
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF14	0	0	0	0	0	0
□	B1WOF14	0	0	-10	0	-10	0
△	B1WOF14	0	0	-20	0	-20	0
◇	B1WOF14	0	0	-30	0	-30	0



c. CA versus α
Figure 43. Continued.

TEST CENTER NSRDC TEST 7

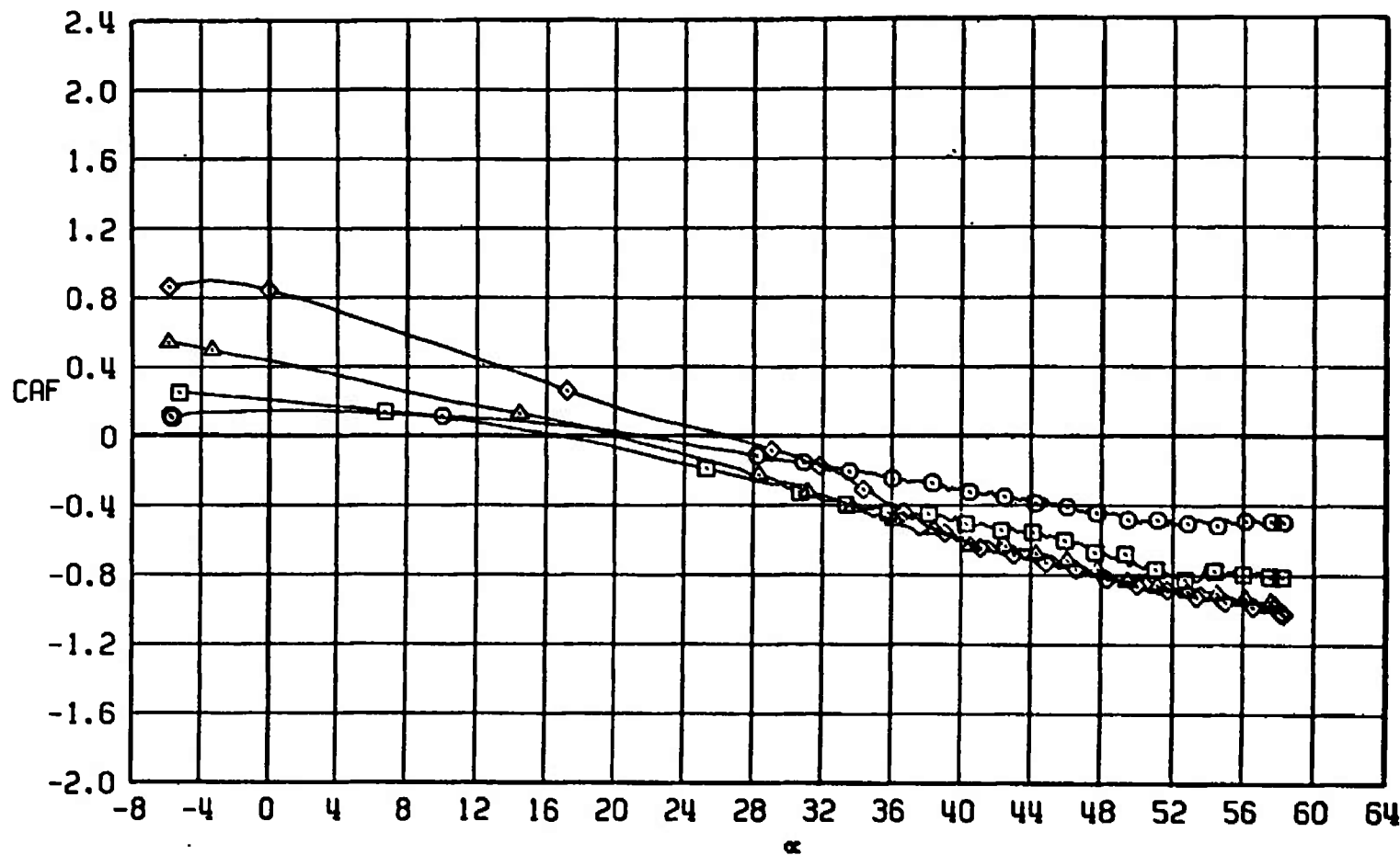
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



d. CAB versus α
Figure 43. Continued.

TEST CENTER NSRDC TEST 7

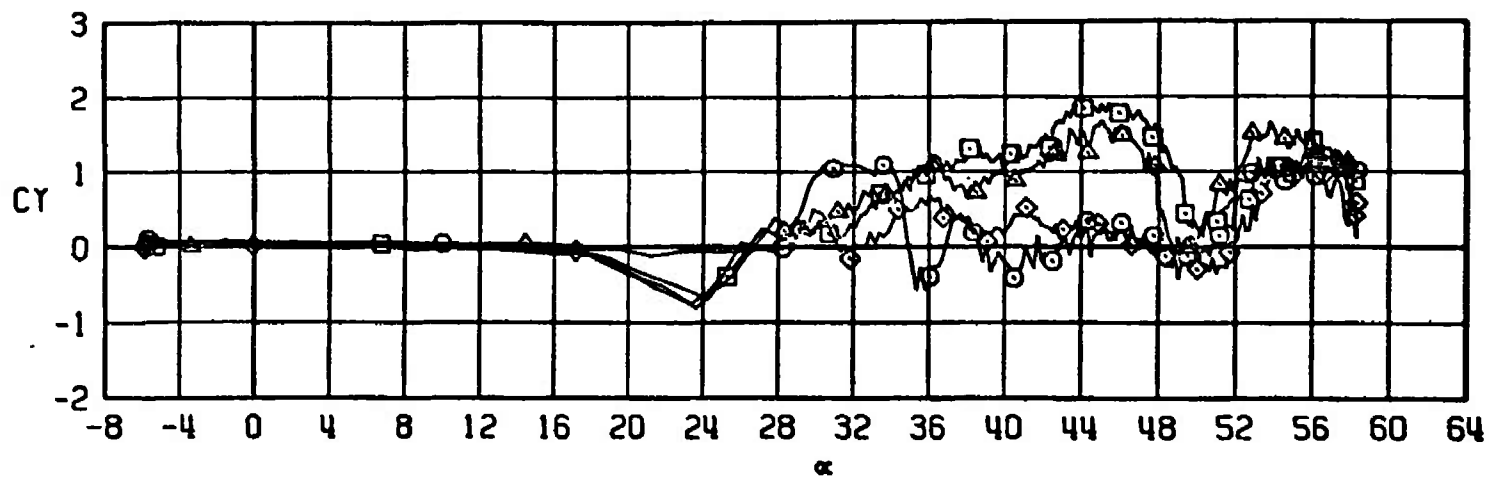
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



e. CAF versus α
Figure 43. Continued.

TEST CENTER NSRDC TEST 7

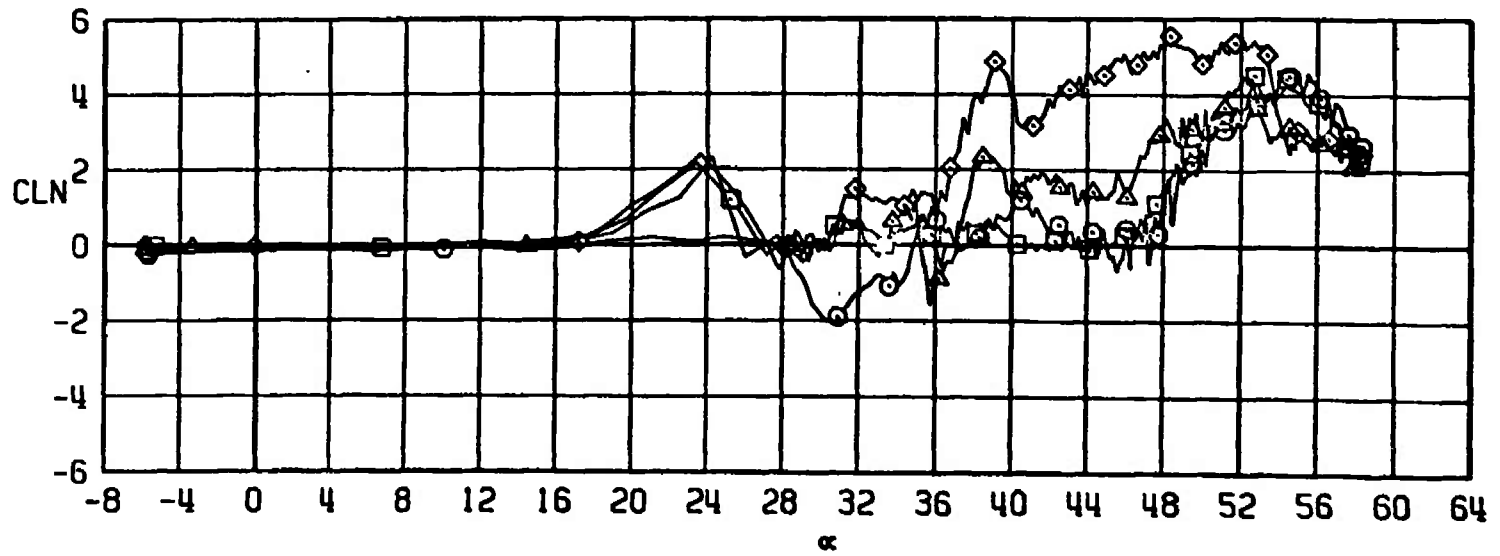
	CONF	L	DEL1	DEL2	OEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



f. CY versus α
Figure 43. Continued.

TEST CENTER NSRDC TEST 7

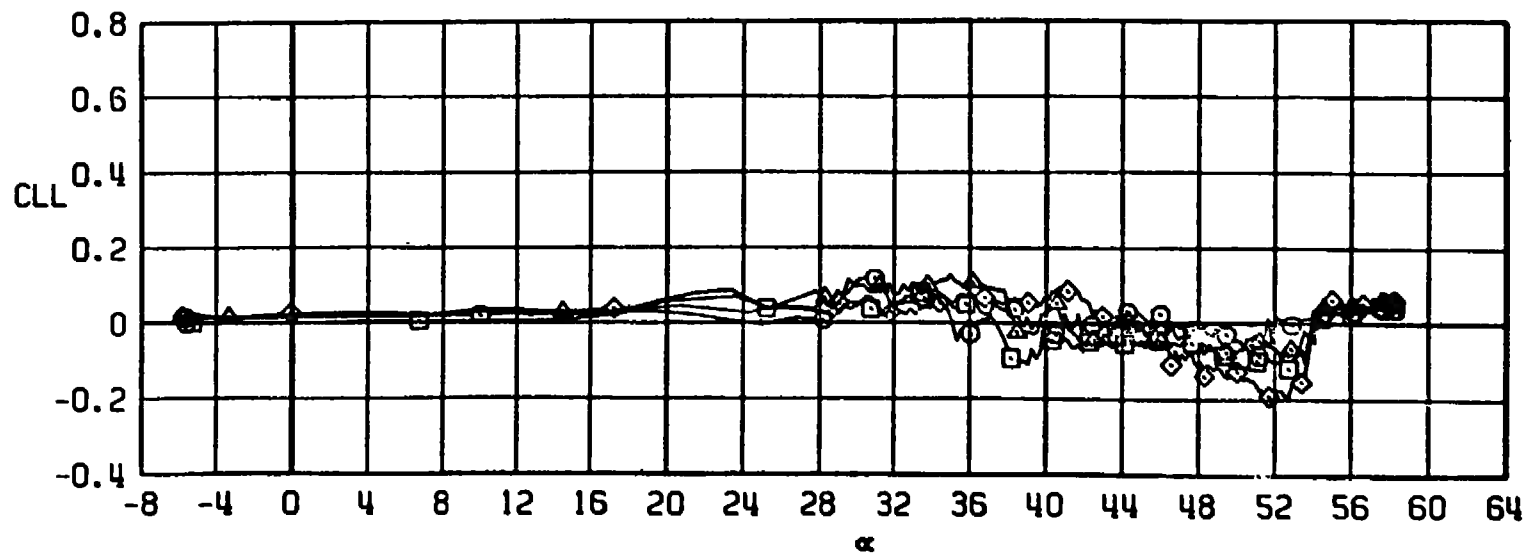
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



g. CLN versus α
Figure 43. Continued.

TEST CENTER NSRDC TEST 7

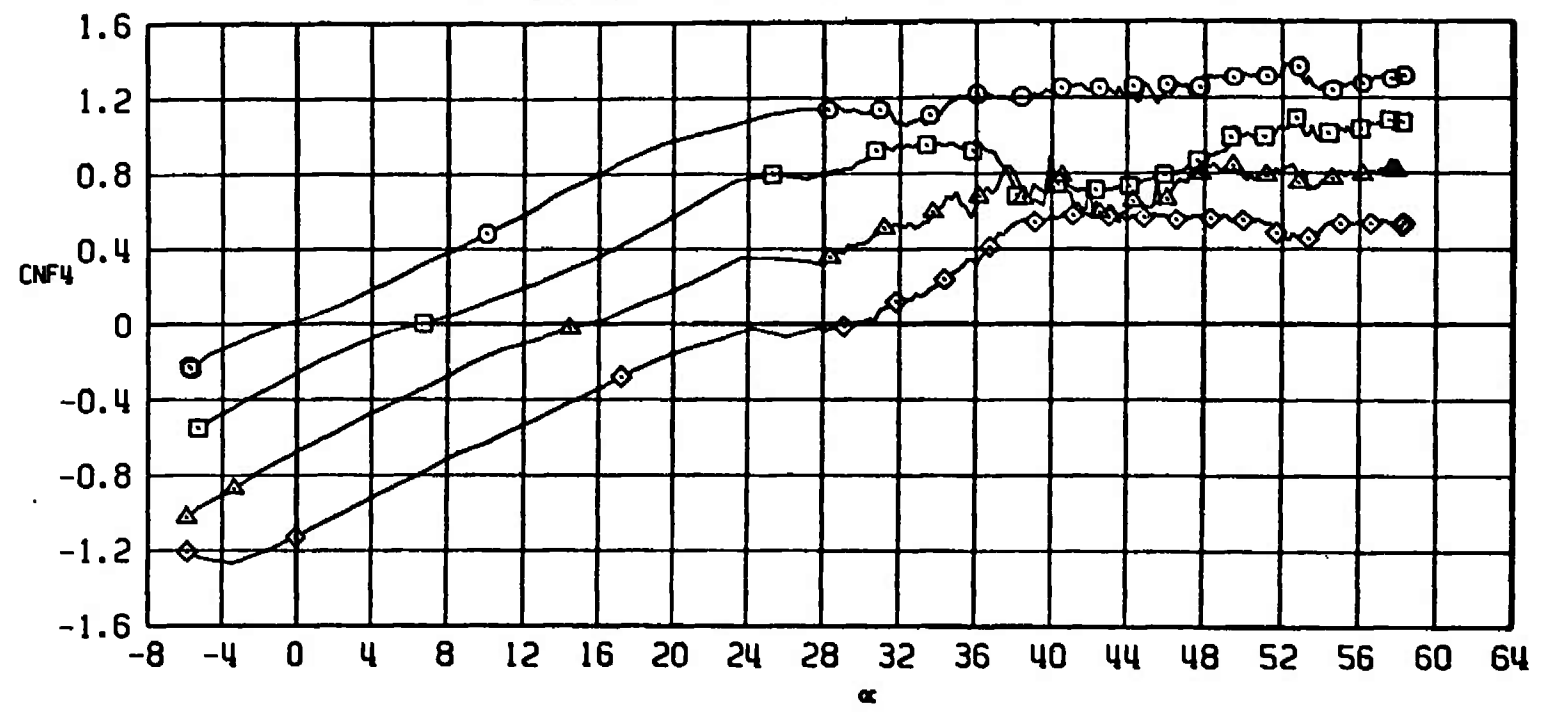
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



h. CLL versus α
Figure 43. Continued.

TEST CENTER NSRDC TEST 7

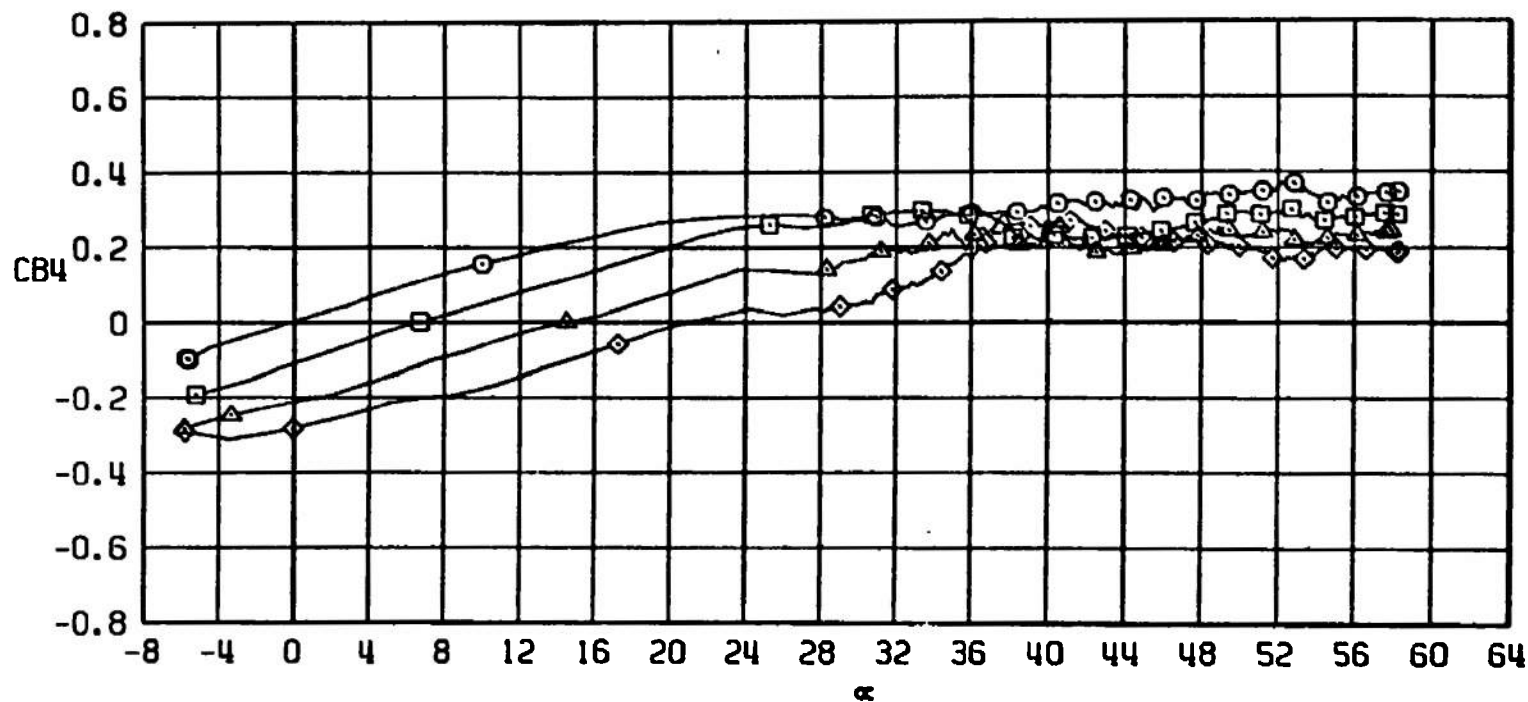
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF14	0	0	0	0	0	0
□	81WOF14	0	0	-10	0	-10	0
△	81WOF14	0	0	-20	0	-20	0
◇	81WOF14	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 43. Continued.

TEST CENTER NSRDC TEST 7

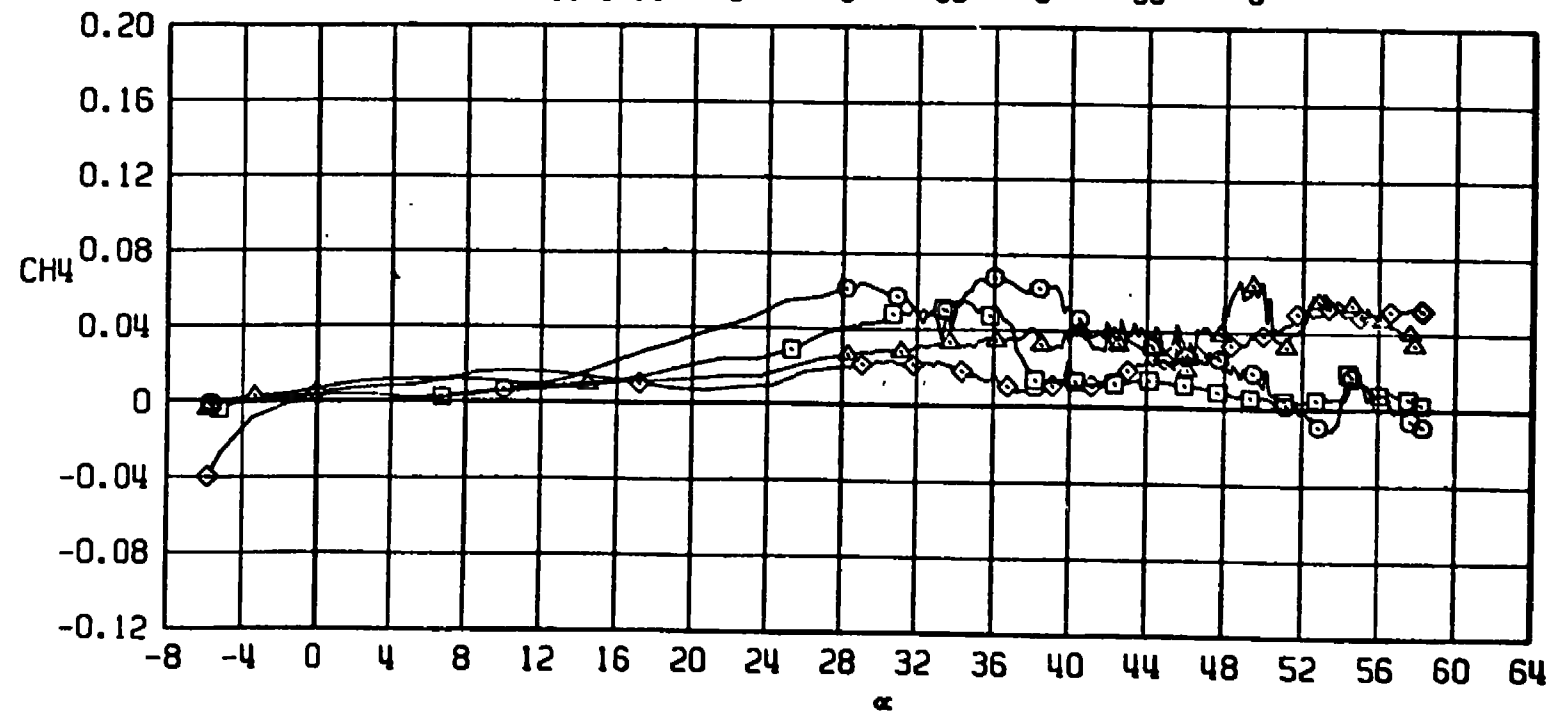
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



j. CB_4 versus α
Figure 43. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



k. CH4 versus α
Figure 43. Concluded.

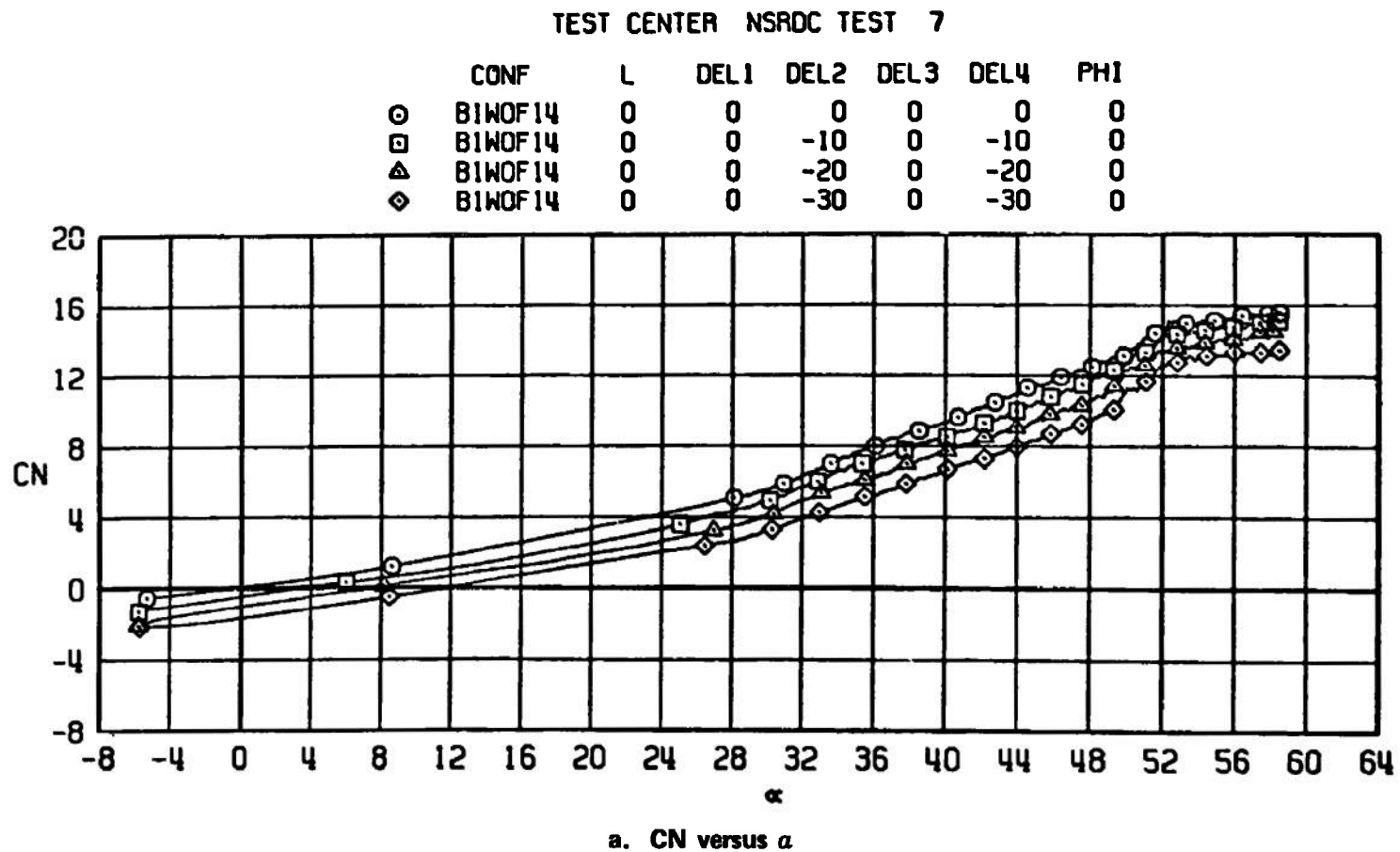
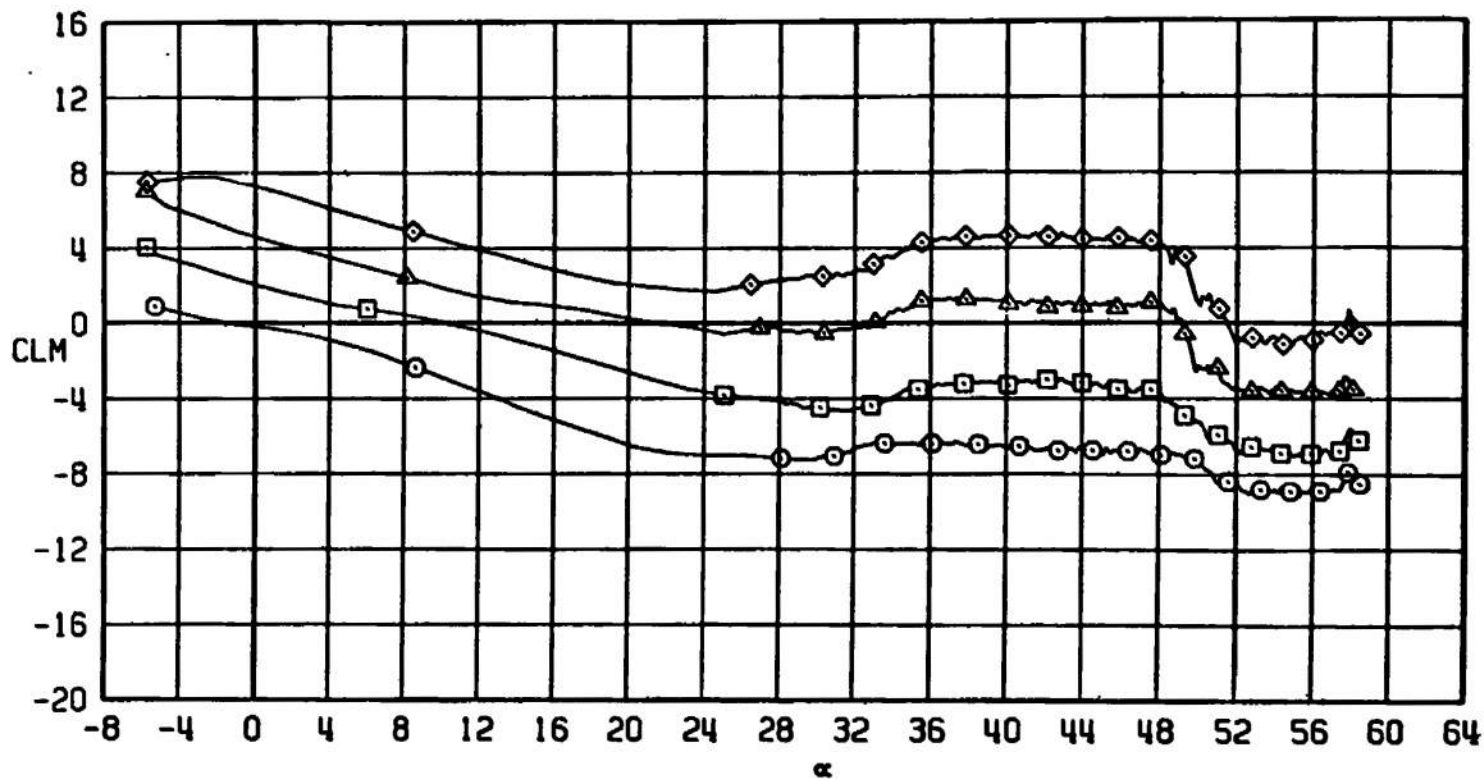


Figure 44. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F14 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.9$.

TEST CENTER NSRDC TEST 7

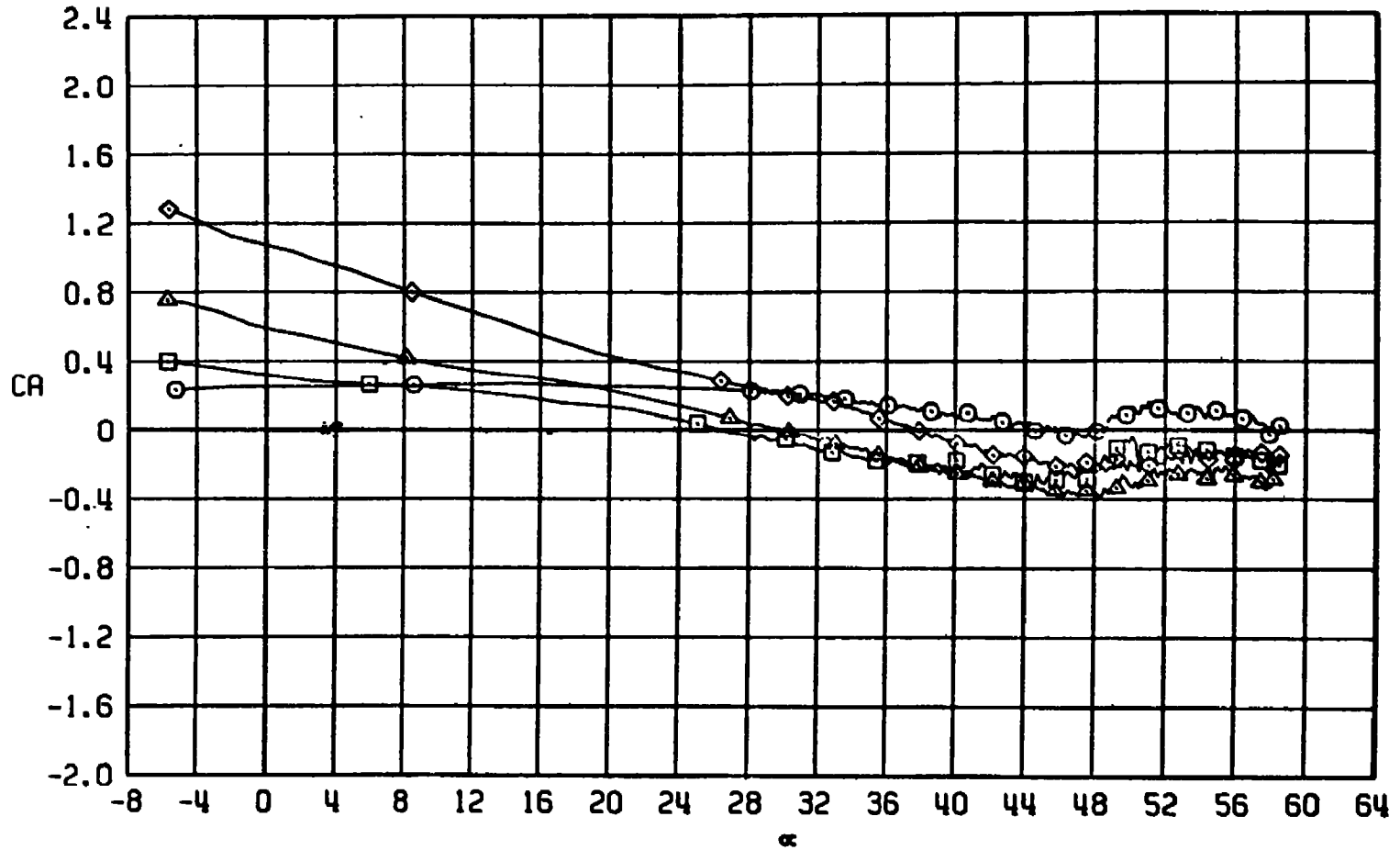
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



b. CLM versus α
Figure 44. Continued.

TEST CENTER NSRDC TEST 7

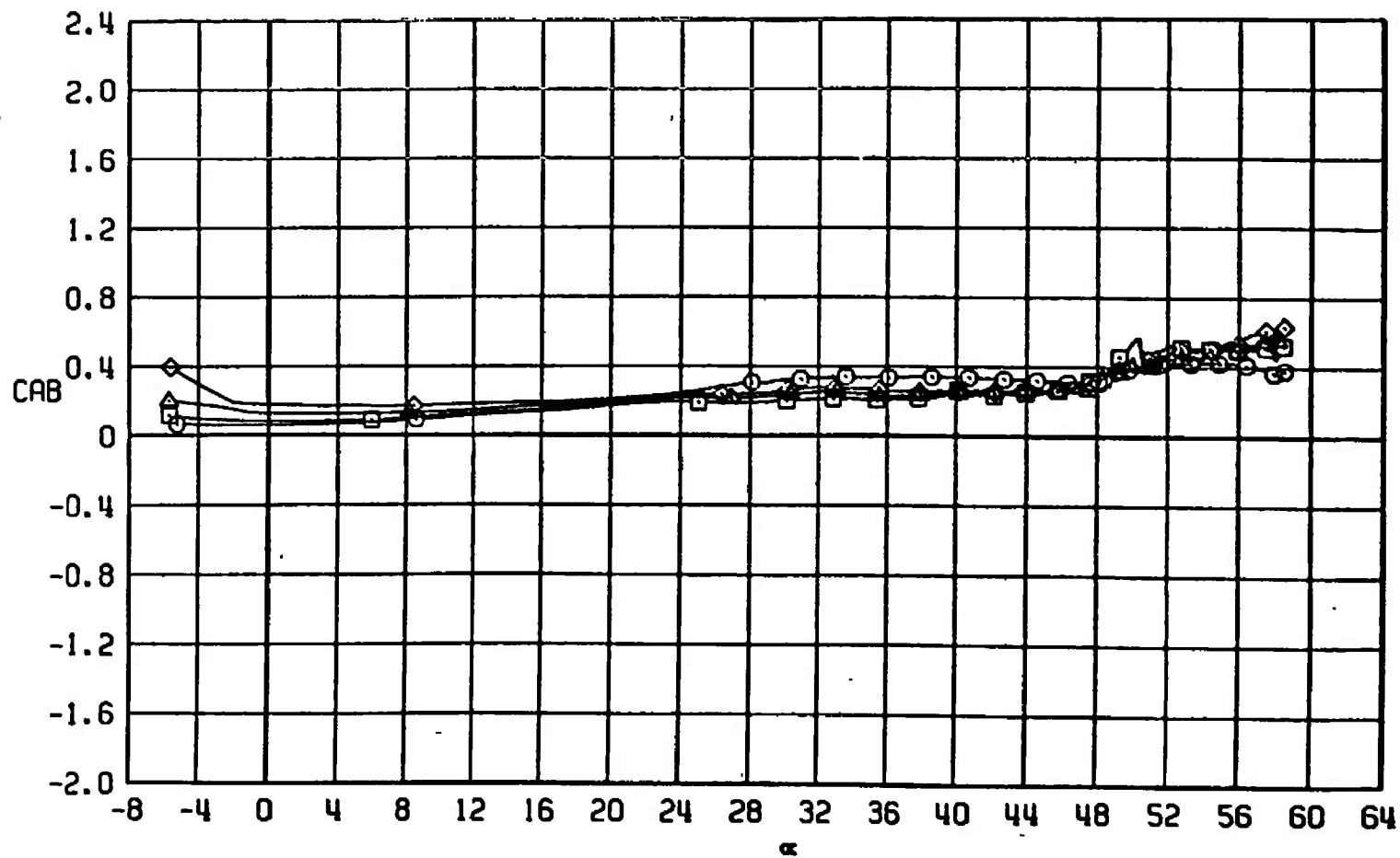
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



c. CA versus α
Figure 44. Continued.

TEST CENTER NSRDC TEST 7

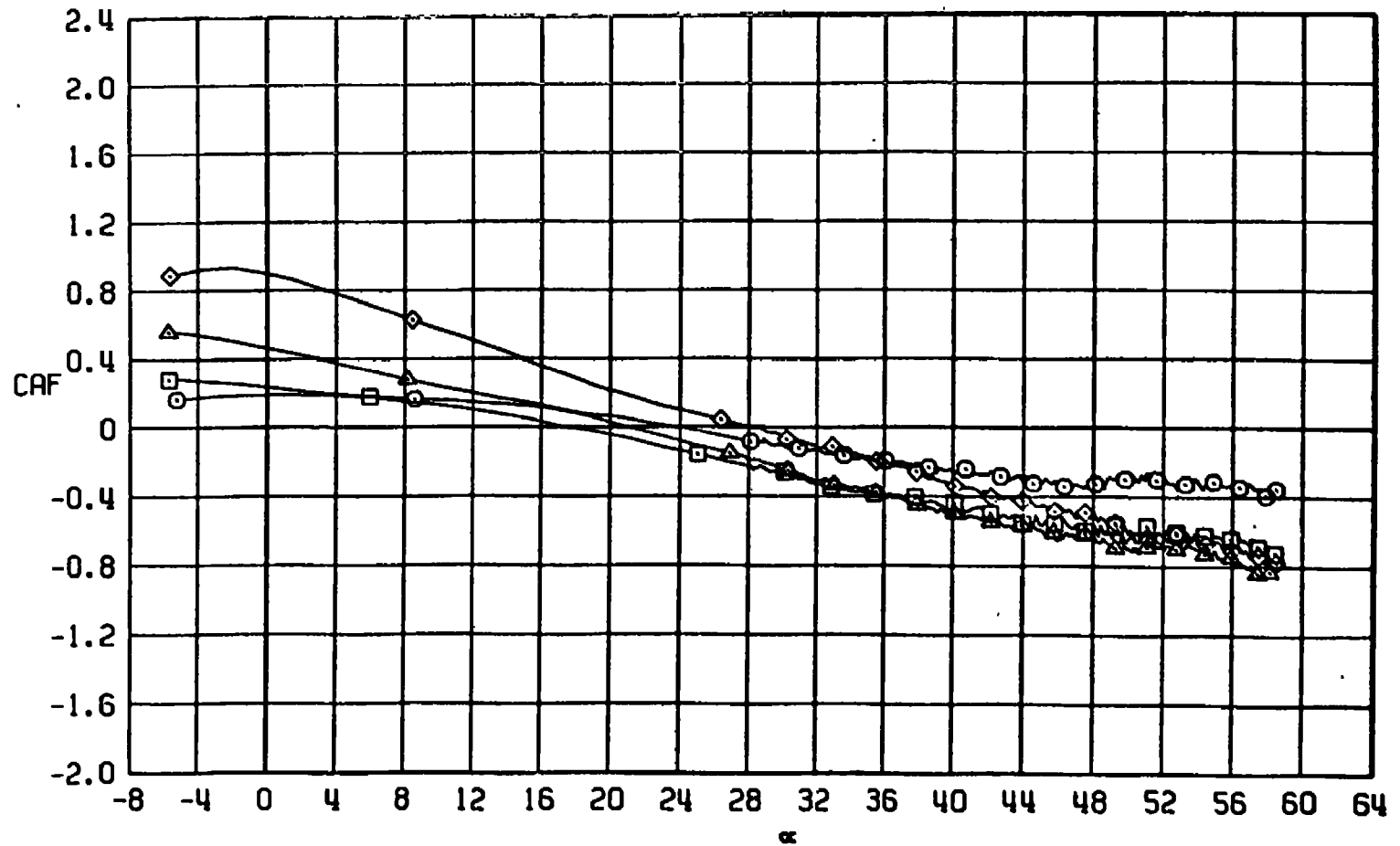
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF14	0	0	0	0	0	0
□	B1WOF14	0	0	-10	0	-10	0
△	B1WOF14	0	0	-20	0	-20	0
◇	B1WOF14	0	0	-30	0	-30	0



d. CAB versus α
Figure 44. Continued.

TEST CENTER NSRDC TEST 7

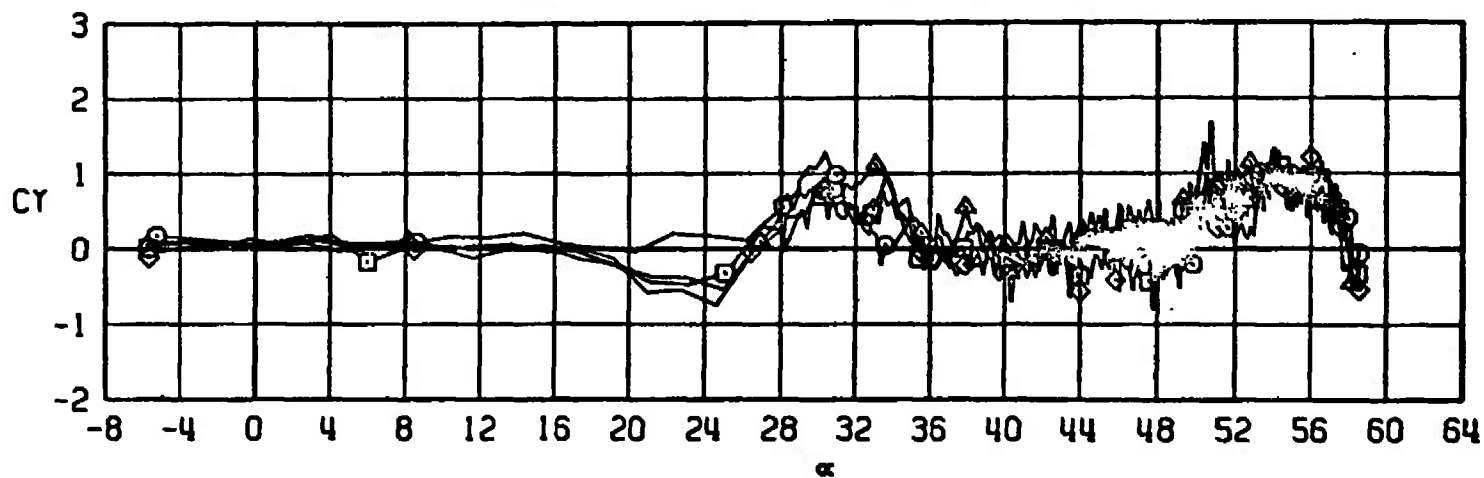
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



e. CAF versus α
Figure 44. Continued.

TEST CENTER NSRDC TEST 7

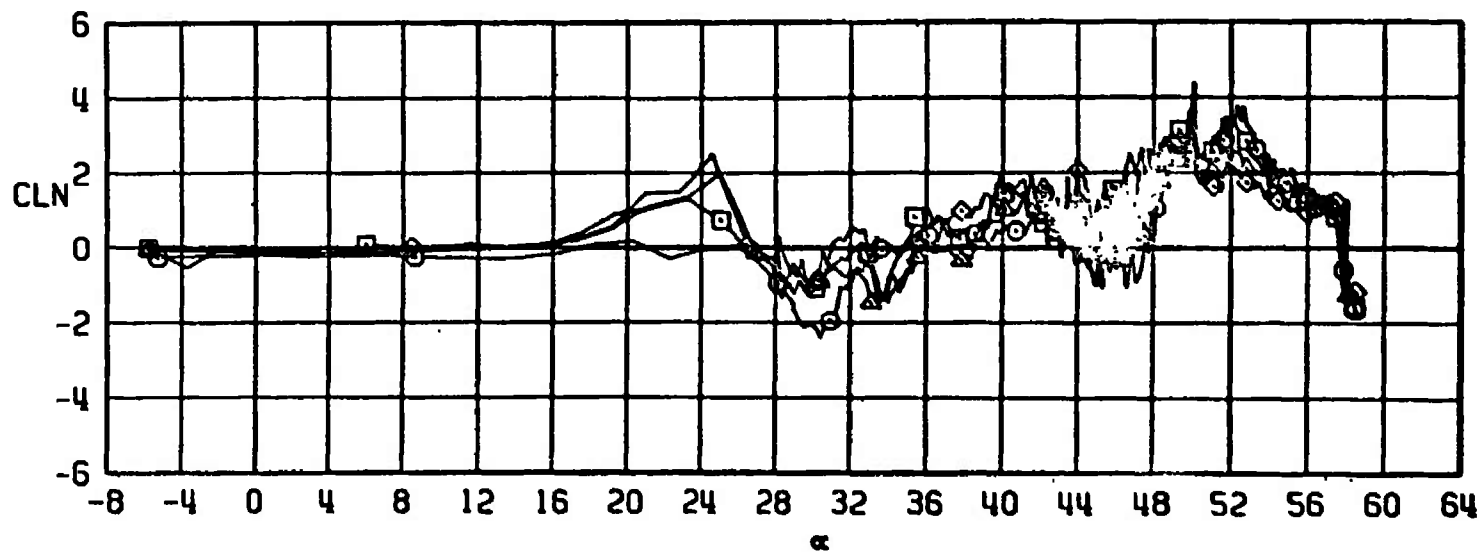
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



f. CY versus α
Figure 44. Continued.

TEST CENTER NSROC TEST 7

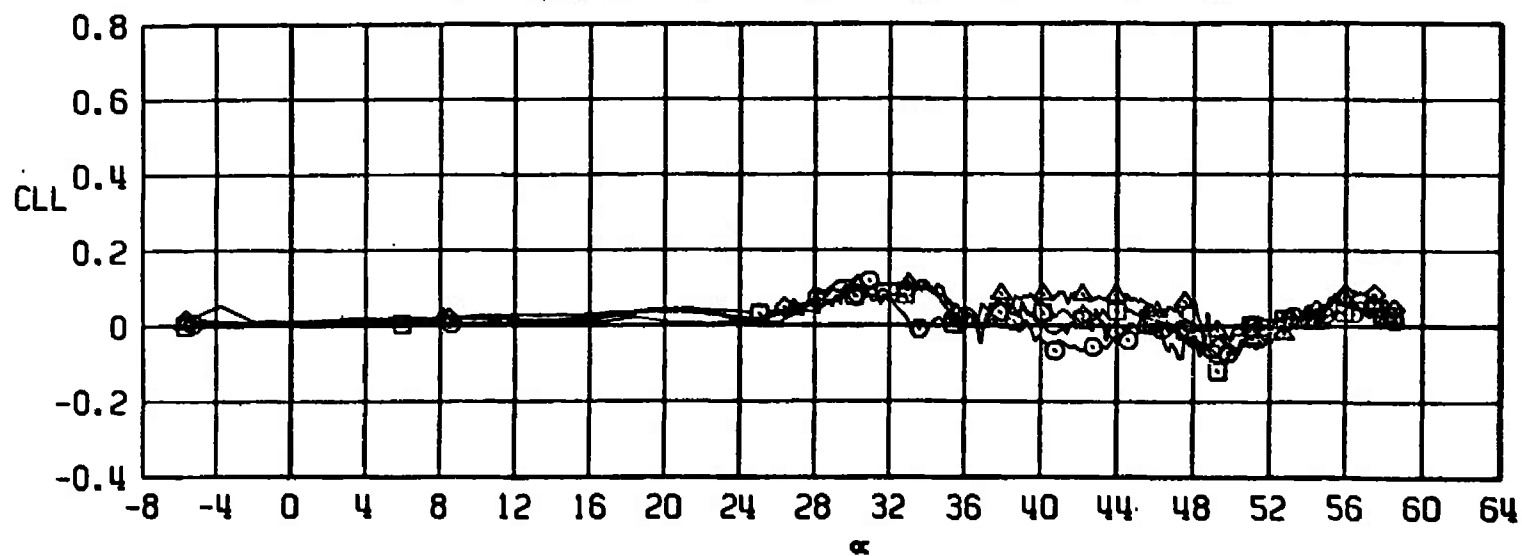
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



g. CLN versus α
Figure 44. Continued.

TEST CENTER NSRDC TEST 7

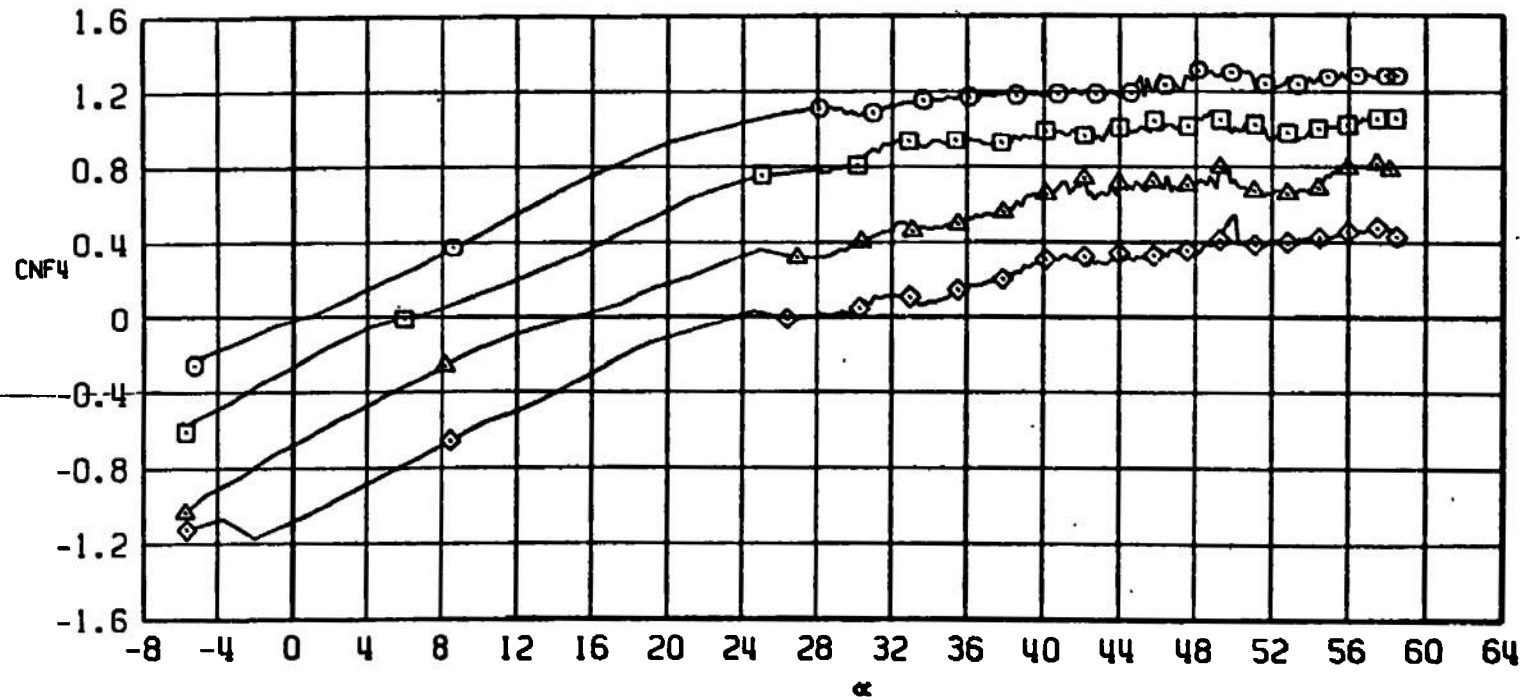
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



h. CLL versus α
Figure 44. Continued.

TEST CENTER NSROC TEST 7

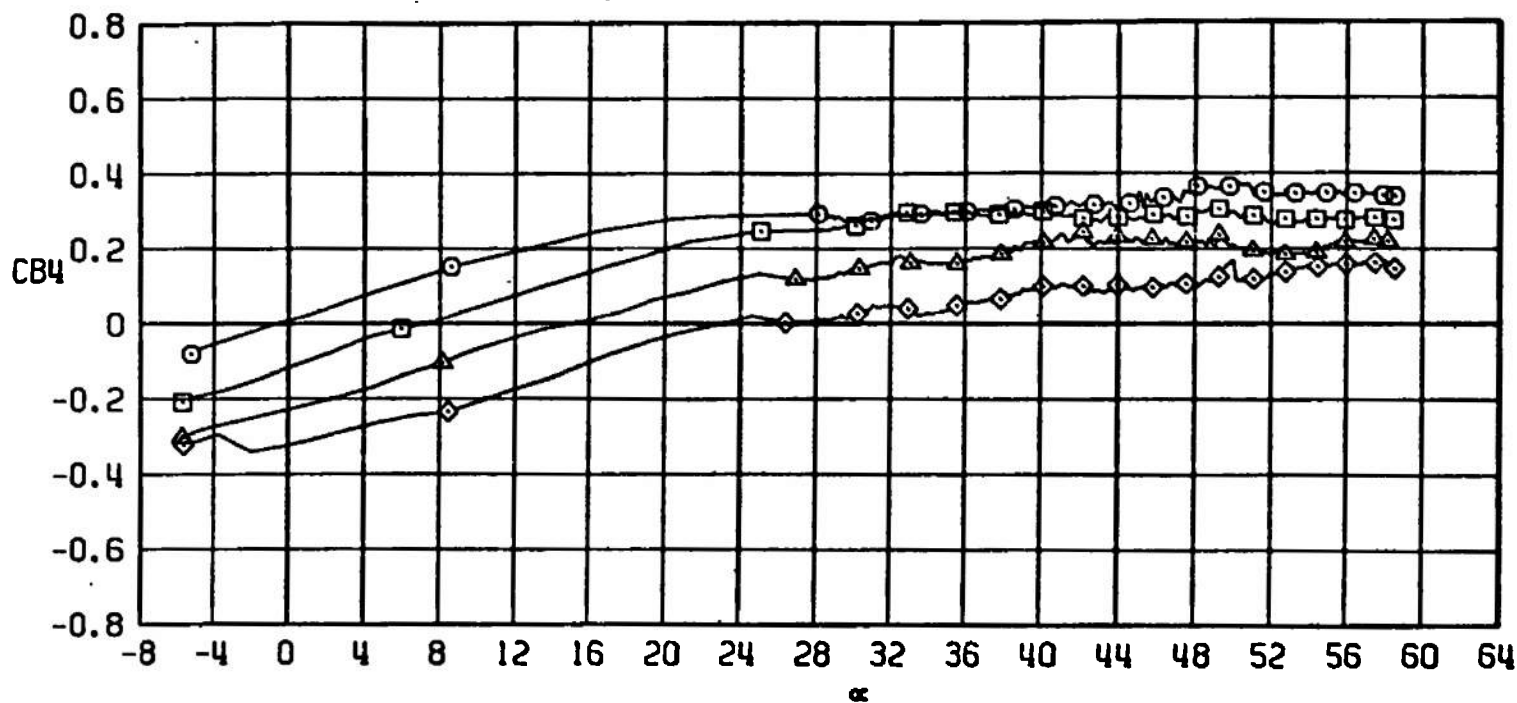
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 44. Continued.

TEST CENTER NSRDC TEST 7

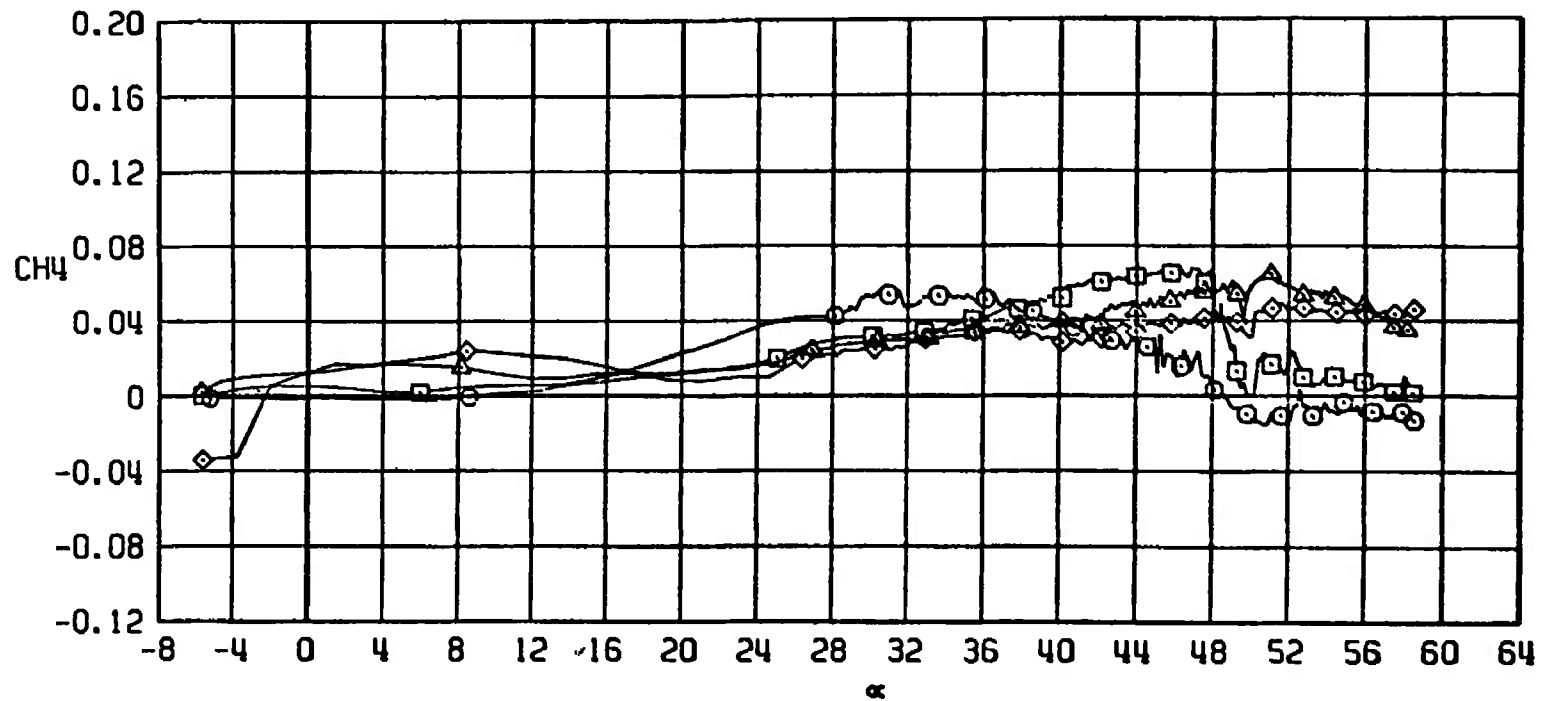
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF14	0	0	0	0	0	0
□	81WOF14	0	0	-10	0	-10	0
△	81WOF14	0	0	-20	0	-20	0
◇	81WOF14	0	0	-30	0	-30	0



j. CB4 versus α
Figure 44. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF14	0	0	0	0	0	0
□	B1WOF14	0	0	-10	0	-10	0
△	B1WOF14	0	0	-20	0	-20	0
◇	B1WOF14	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 44. Concluded.

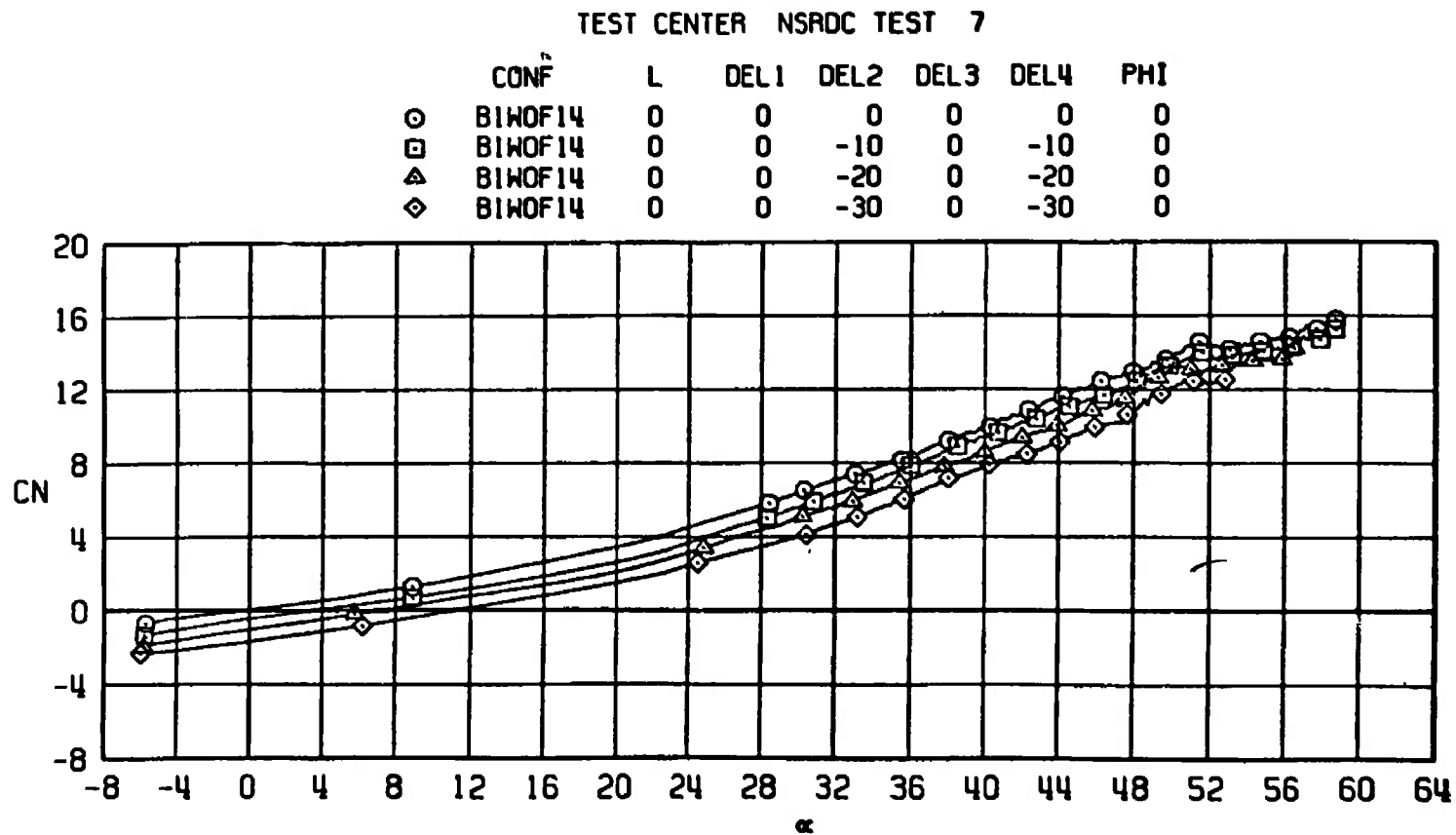
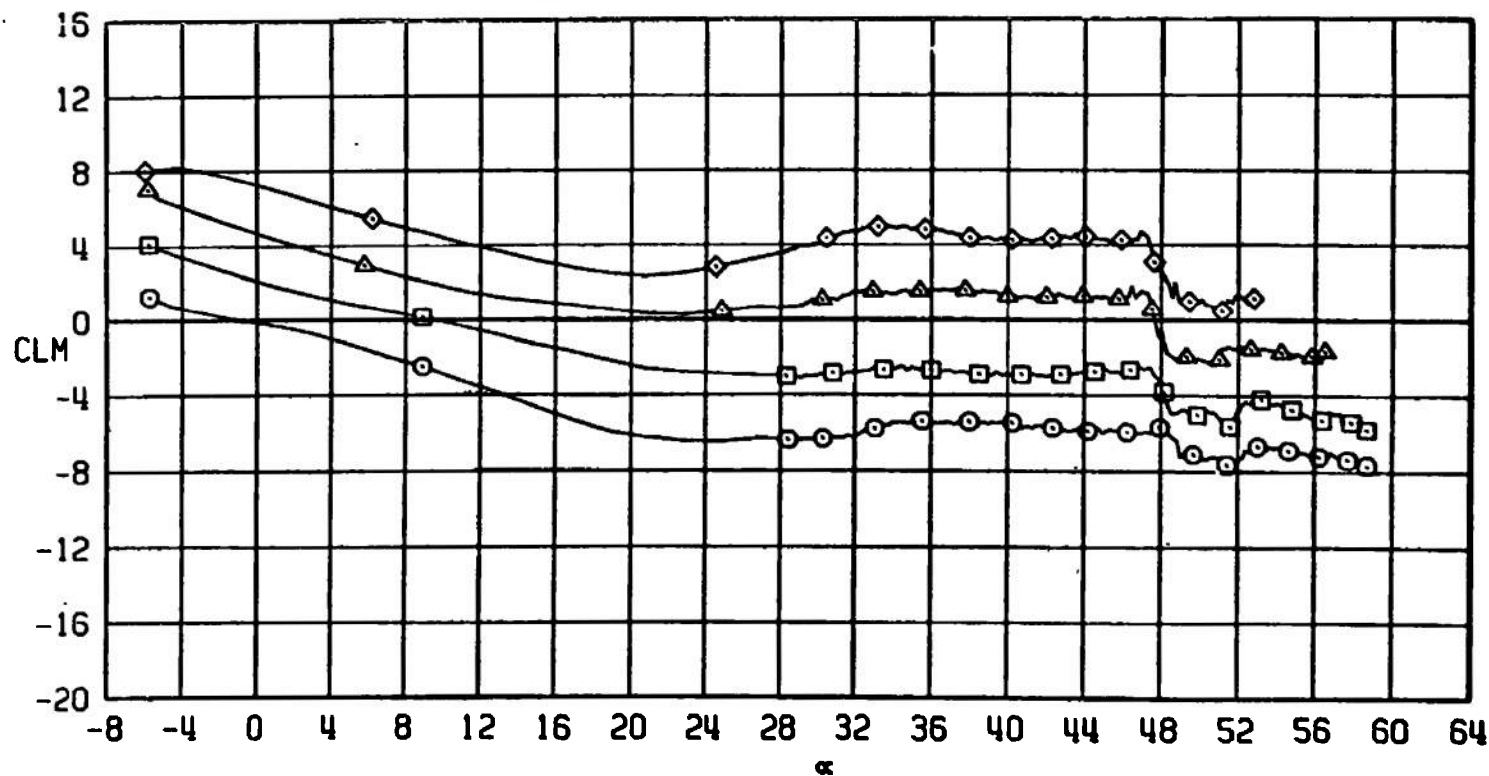
a. CN versus α

Figure 45. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F14 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.0$.

TEST CENTER NSRDC TEST 7

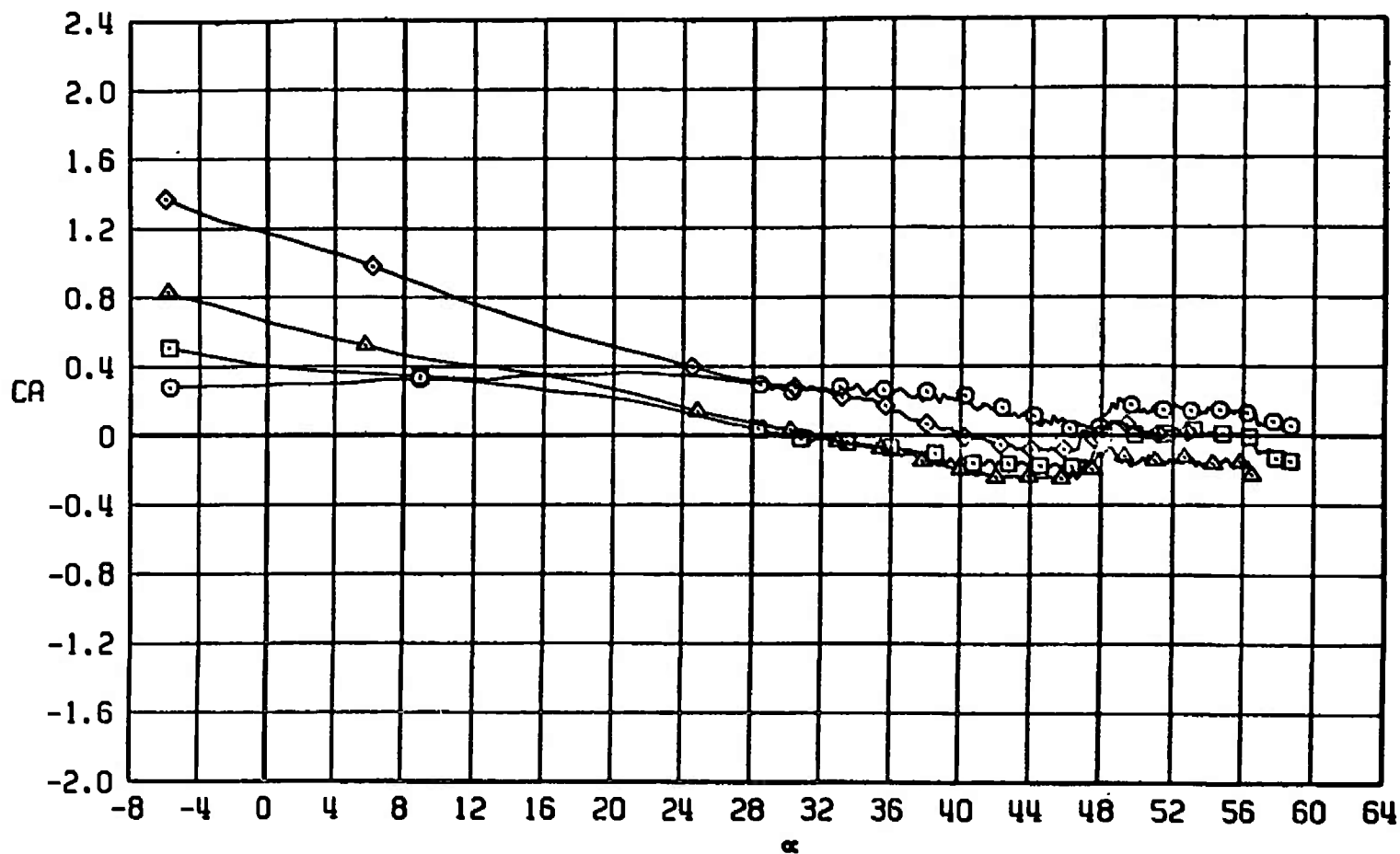
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



b. CLM versus α
Figure 45. Continued.

TEST CENTER NSRDC TEST 7

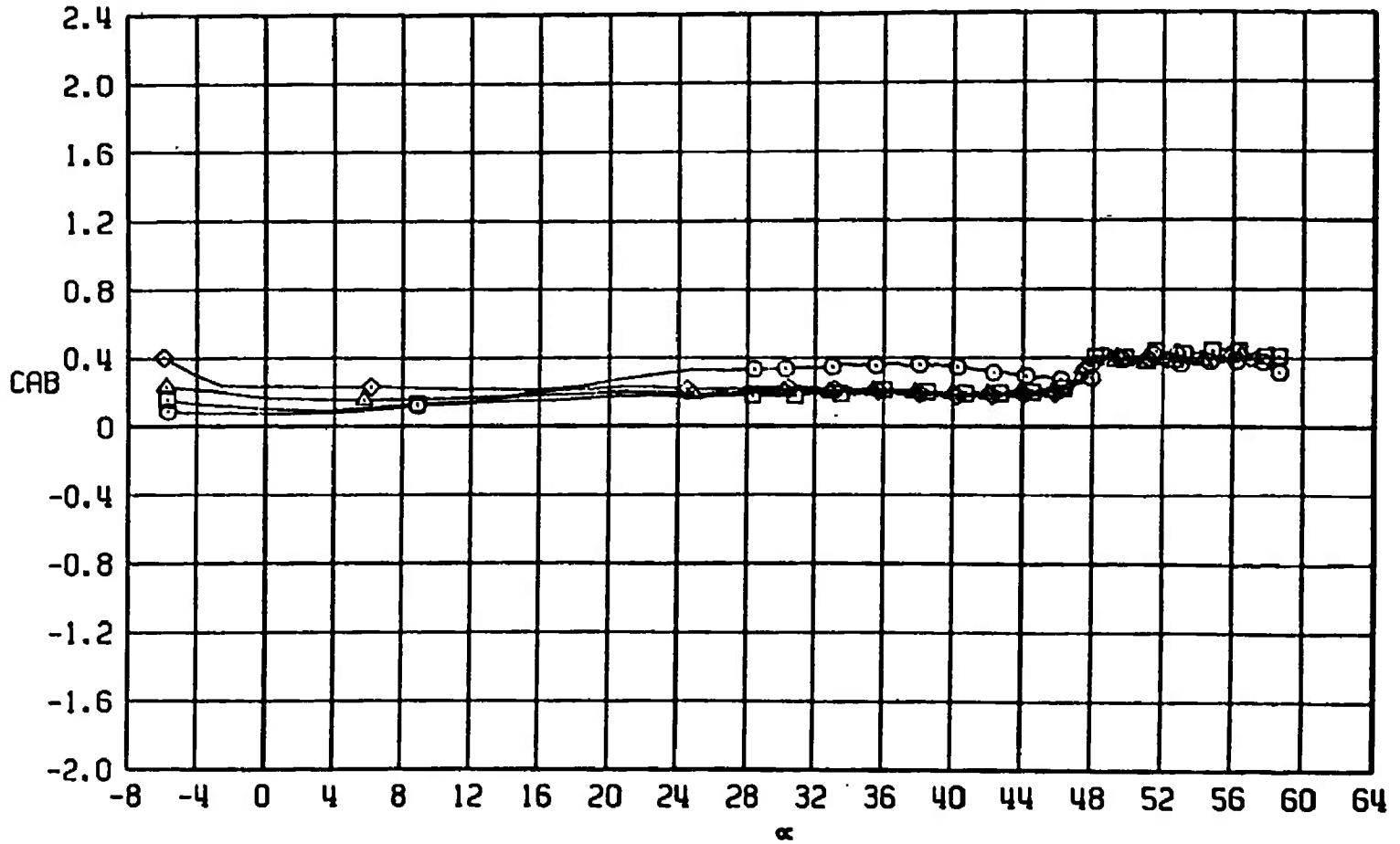
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



c. CA versus α
Figure 45. Continued.

TEST CENTER NSRDC TEST 7

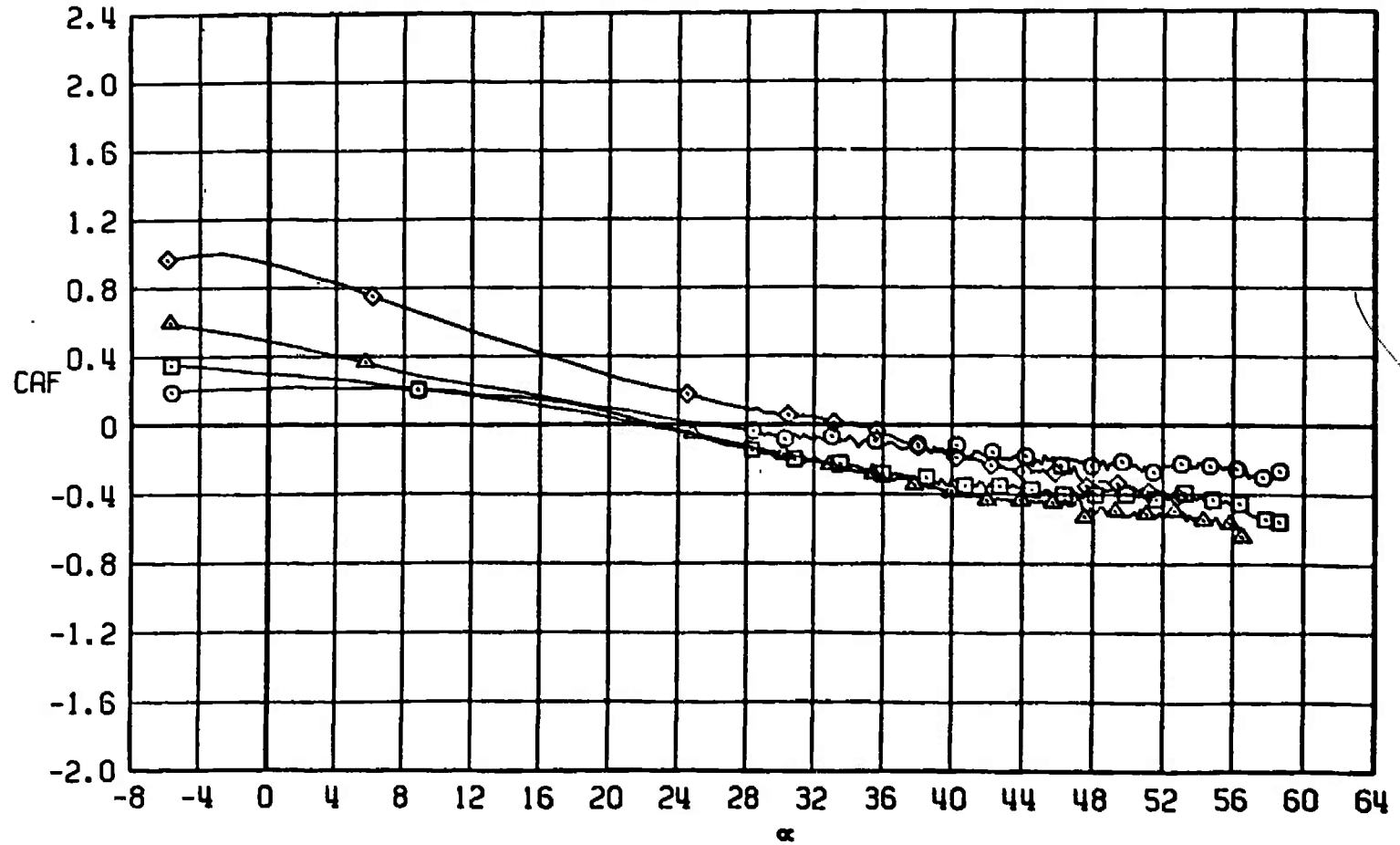
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



d. CAB versus α
Figure 45. Continued.

TEST CENTER NSRDC TEST 7

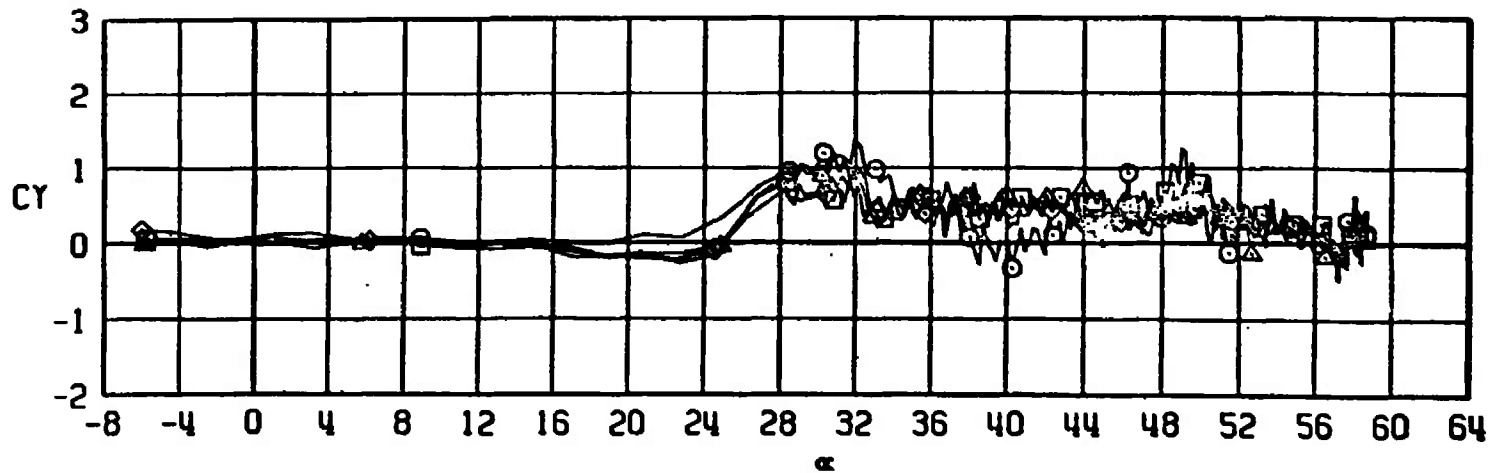
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF14	0	0	0	0	0	0
□	81WOF14	0	0	-10	0	-10	0
△	81WOF14	0	0	-20	0	-20	0
◇	81WOF14	0	0	-30	0	-30	0



e. CAF versus α
Figure 45. Continued.

TEST CENTER NSROC TEST 7

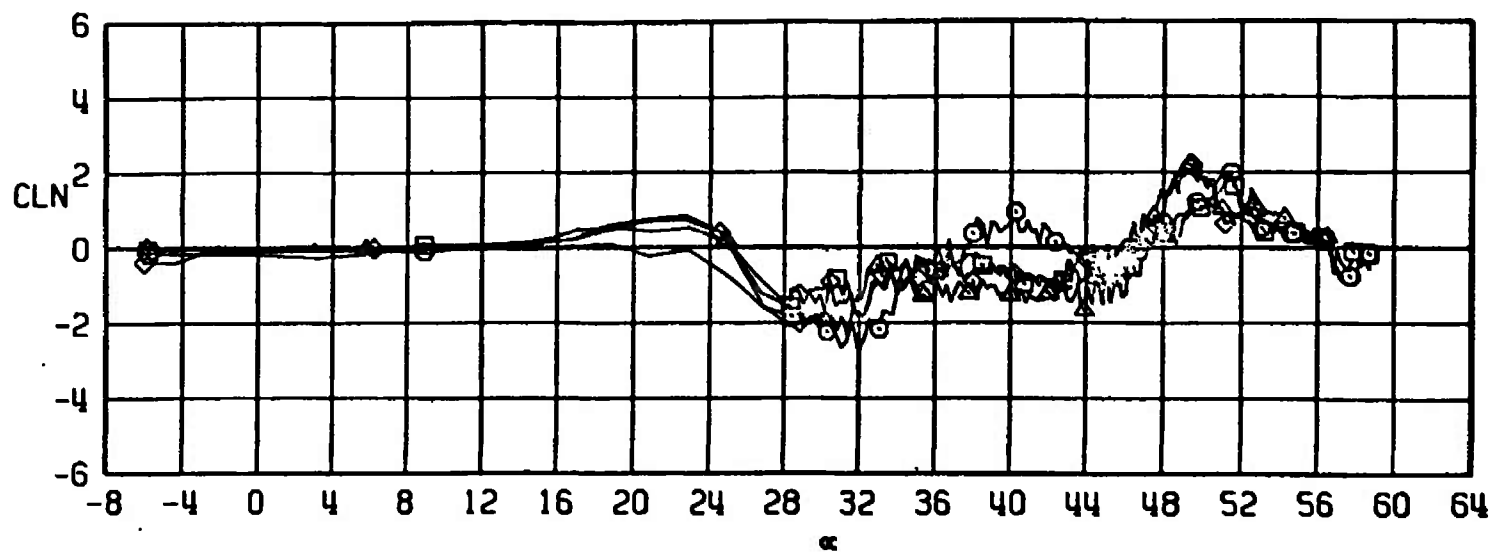
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	81WOF14	0	0	0	0	0	0
□	81WOF14	0	0	-10	0	-10	0
△	81WOF14	0	0	-20	0	-20	0
◇	81WOF14	0	0	-30	0	-30	0



f. CY versus α
Figure 45. Continued.

TEST CENTER NSRDC TEST 7

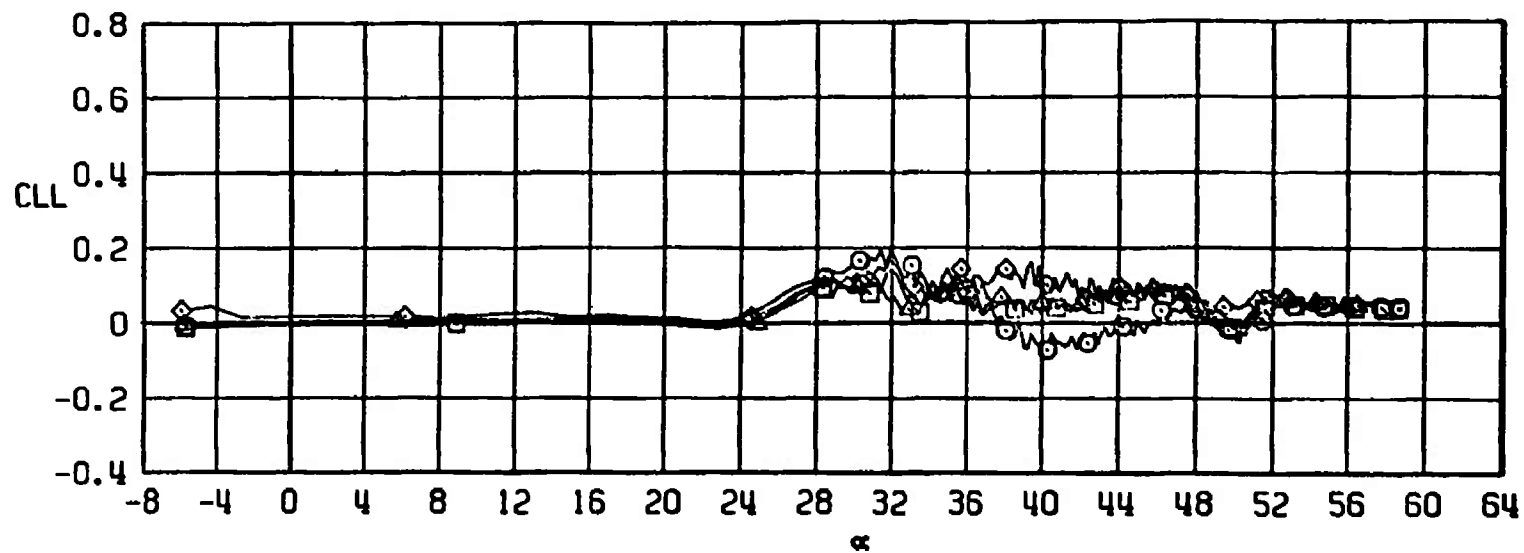
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF14	0	0	0	0	0	0
⊠	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



g. CLN versus α
Figure 45. Continued.

TEST CENTER NSRDC TEST 7

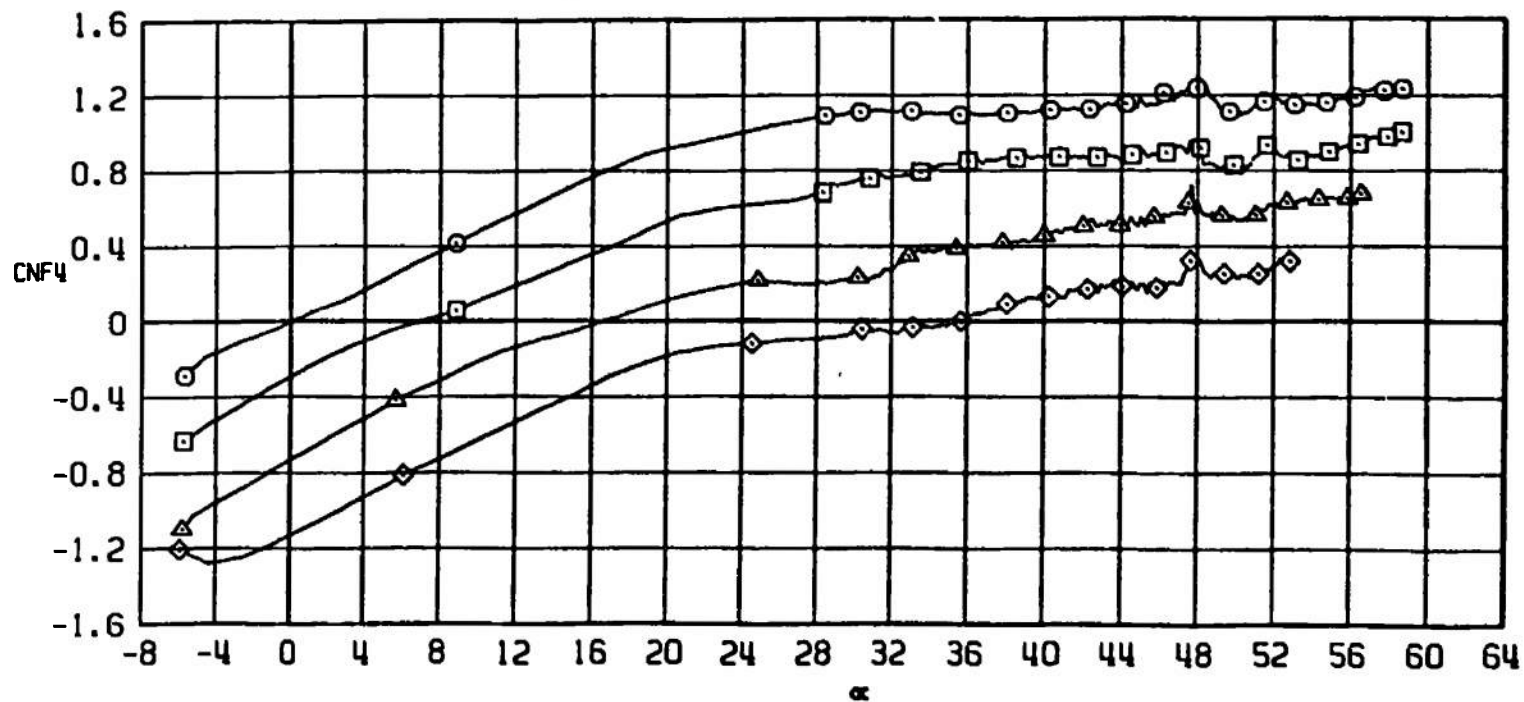
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



h. CLL versus α
Figure 45. Continued.

TEST CENTER NSRDC TEST 7

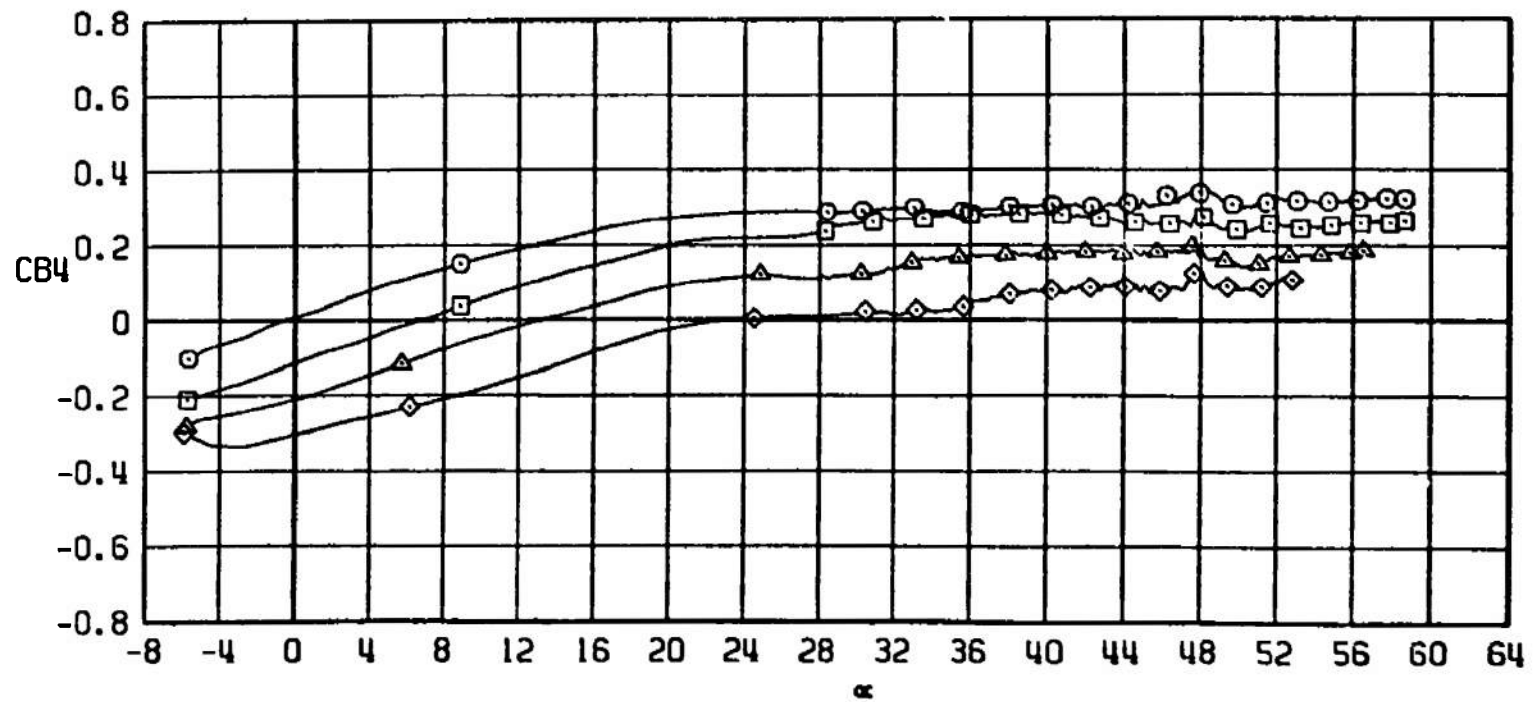
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF14	0	0	0	0	0	0
□	B1WOF14	0	0	-10	0	-10	0
△	B1WOF14	0	0	-20	0	-20	0
◇	B1WOF14	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 45. Continued.

TEST CENTER NSRDC TEST 7

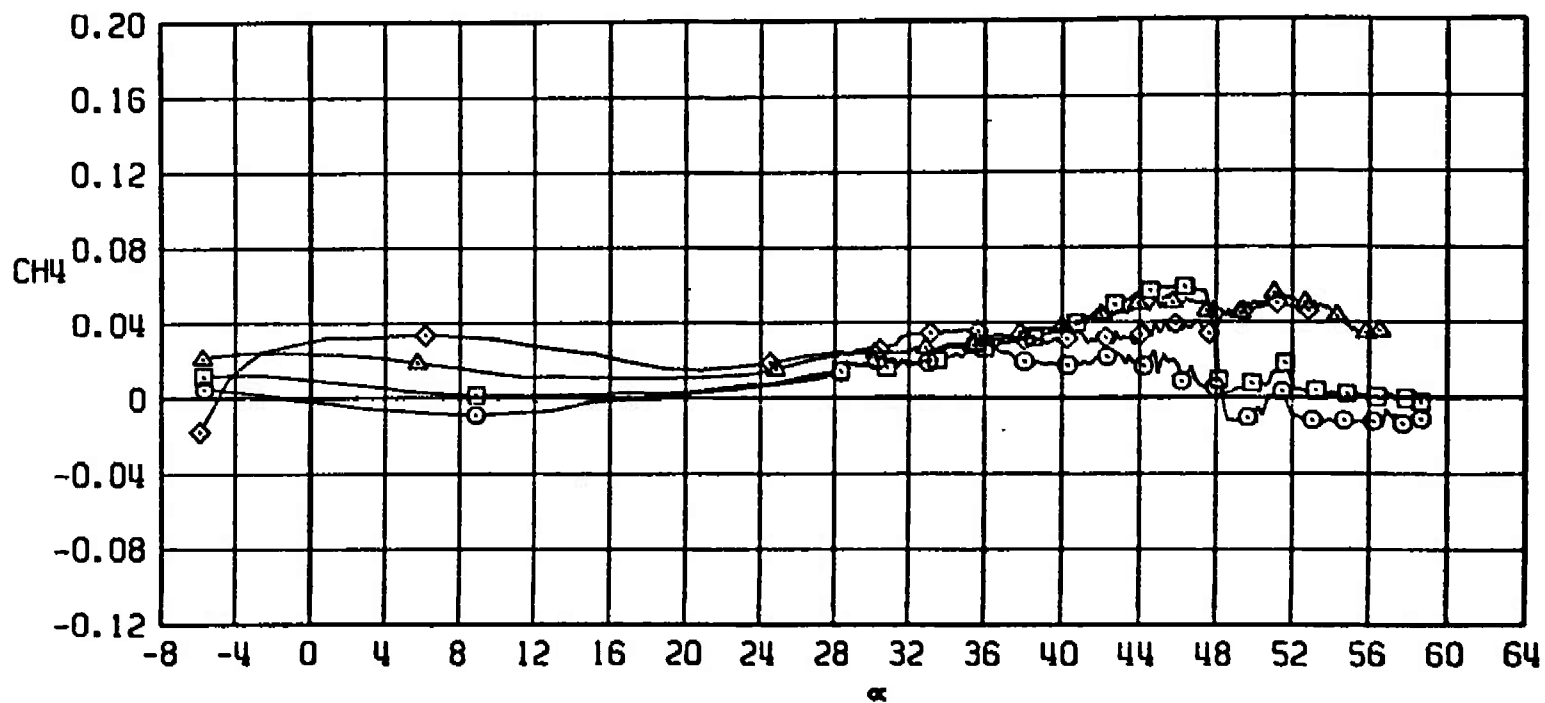
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF14	0	0	0	0	0	0
□	B1WOF14	0	0	-10	0	-10	0
△	B1WOF14	0	0	-20	0	-20	0
◇	B1WOF14	0	0	-30	0	-30	0



j. CB4 versus α
Figure 45. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 45. Concluded.

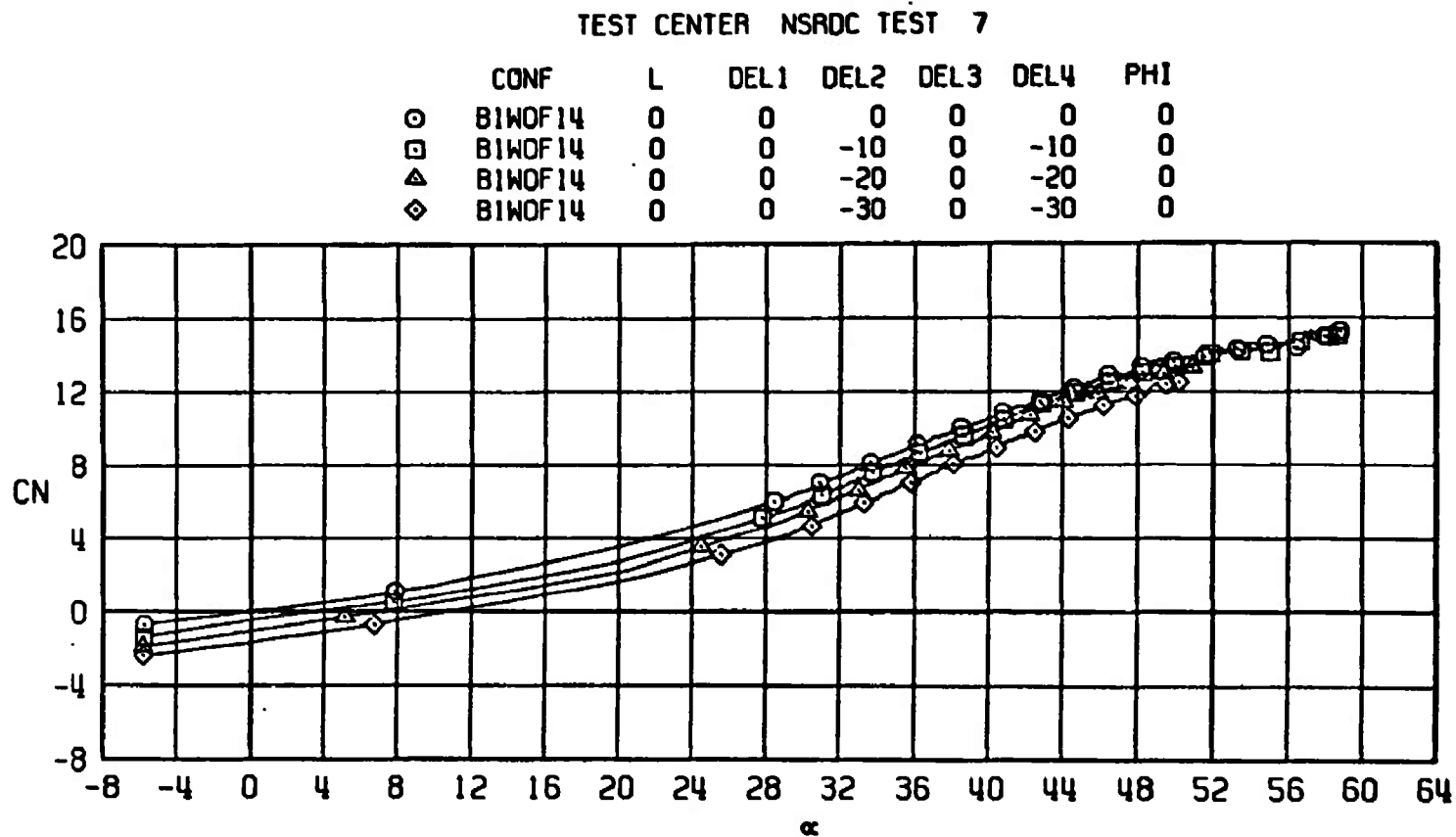
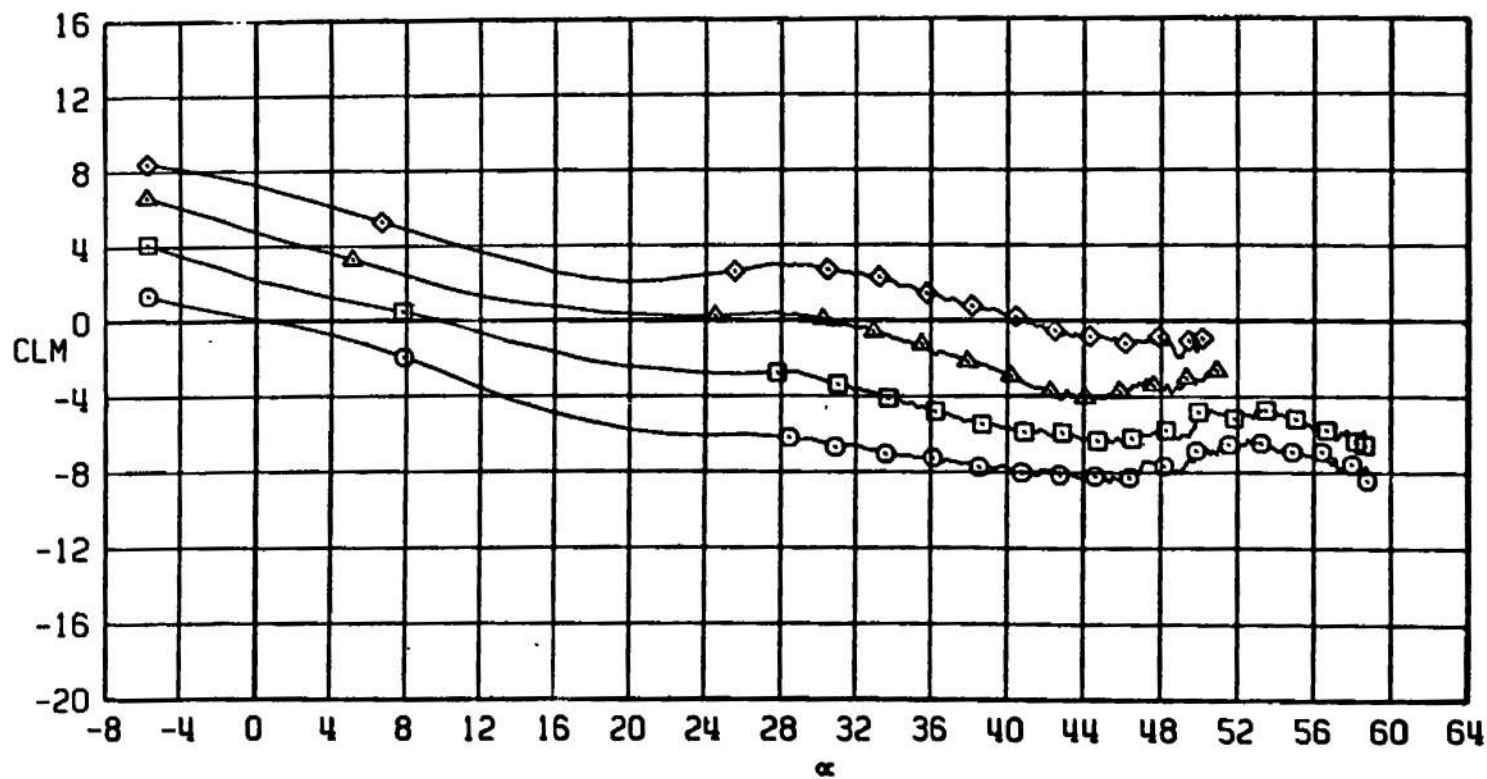


Figure 46. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F14 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.1$.

TEST CENTER NSRDC TEST 7

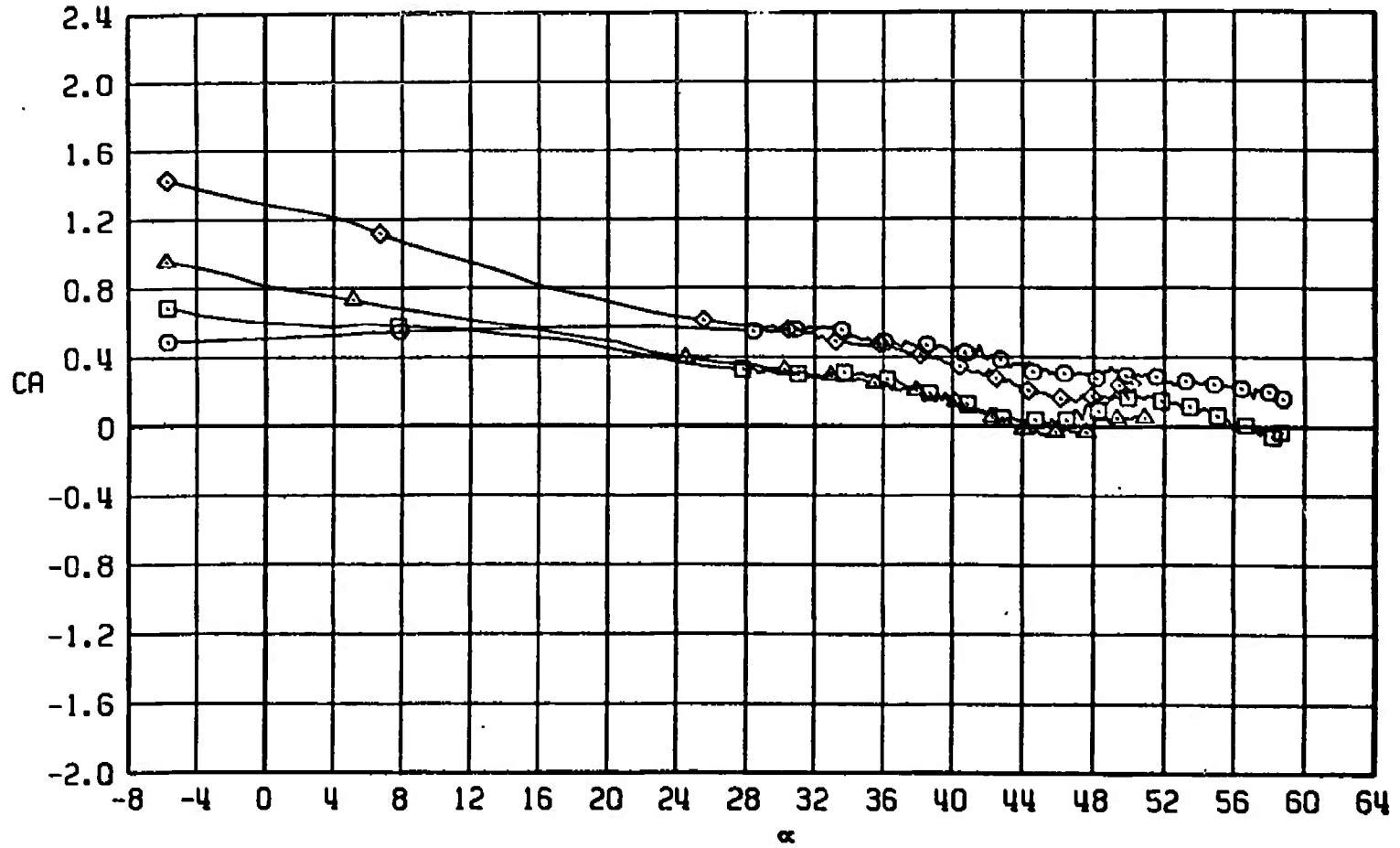
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



b. CLM versus α
Figure 46. Continued.

TEST CENTER NSRDC TEST 7

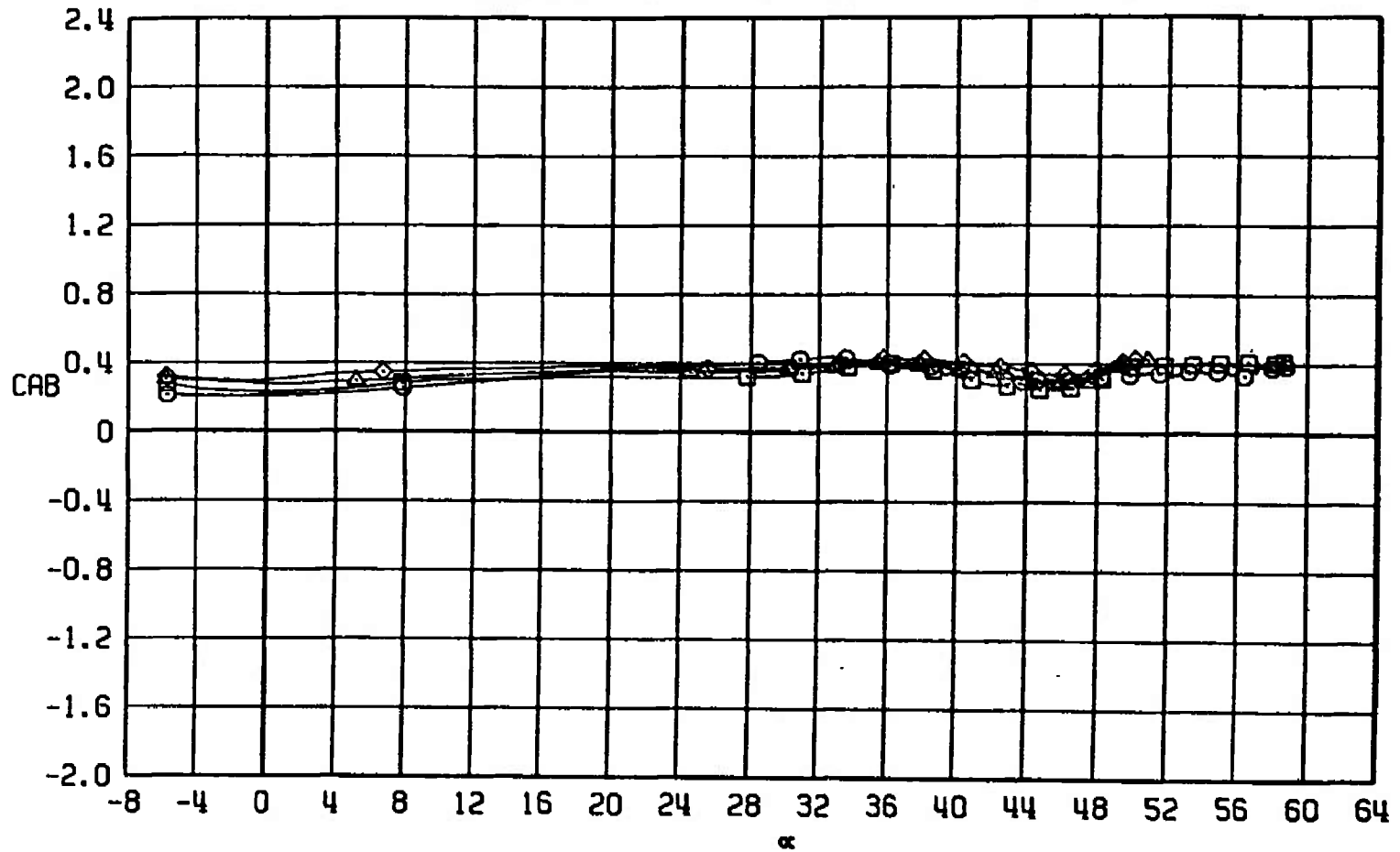
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF14	0	0	0	0	0	0
□	B1WOF14	0	0	-10	0	-10	0
△	B1WOF14	0	0	-20	0	-20	0
◇	B1WOF14	0	0	-30	0	-30	0



c. CA versus α
Figure 46. Continued.

TEST CENTER NSROC TEST 7

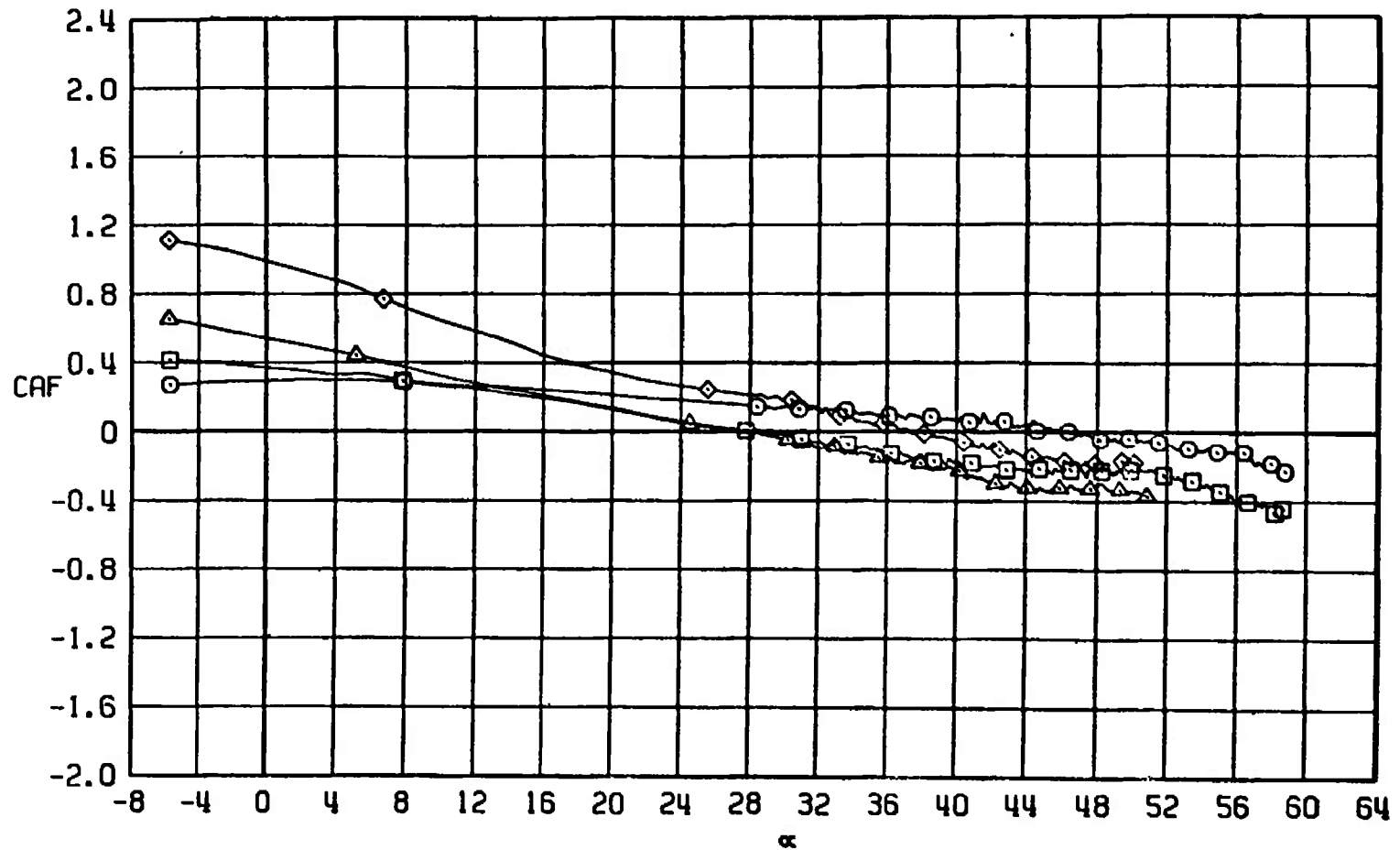
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



d. CAB versus α
Figure 46. Continued.

TEST CENTER NSRDC TEST 7

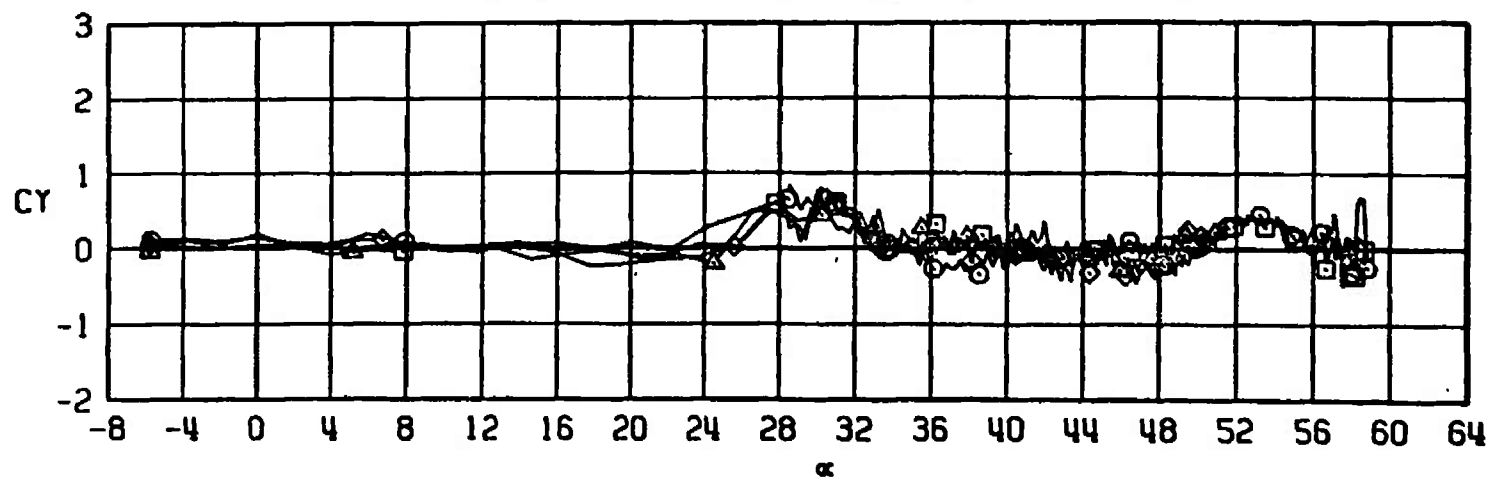
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF14	0	0	0	0	0	0
□	B1WOF14	0	0	-10	0	-10	0
△	B1WOF14	0	0	-20	0	-20	0
◇	B1WOF14	0	0	-30	0	-30	0



e. CAF versus α
Figure 46. Continued.

TEST CENTER NSRDC TEST 7

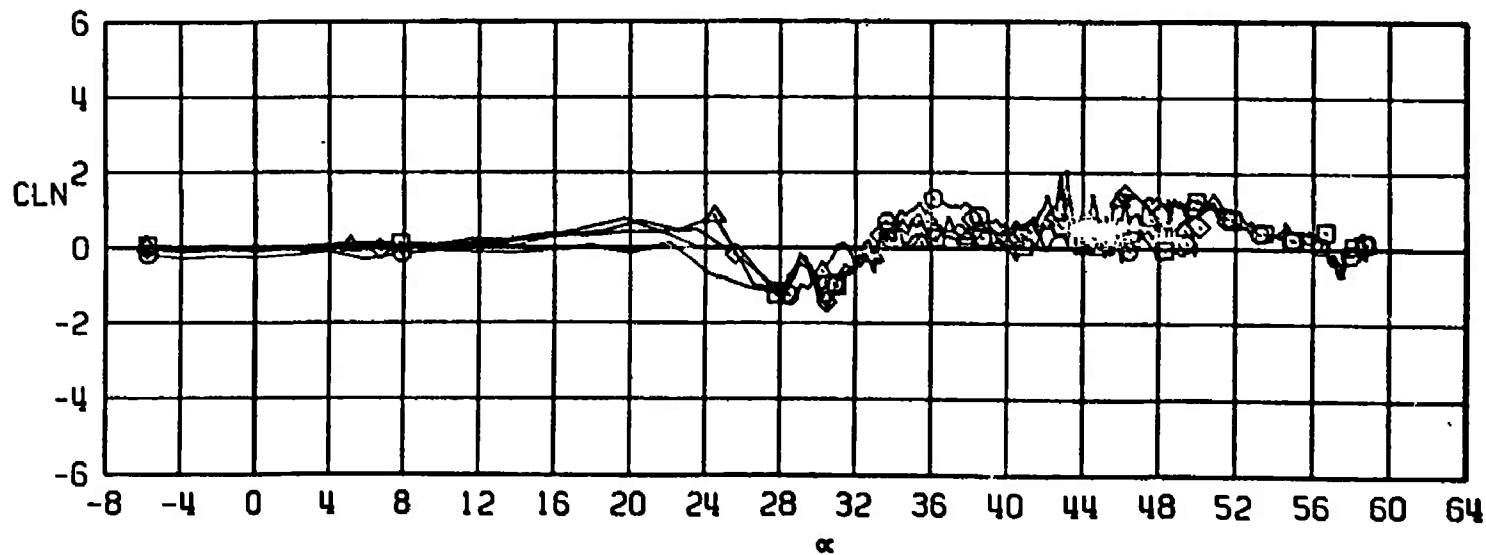
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



f. CY versus α
Figure 46. Continued.

TEST CENTER NSRDC TEST 7

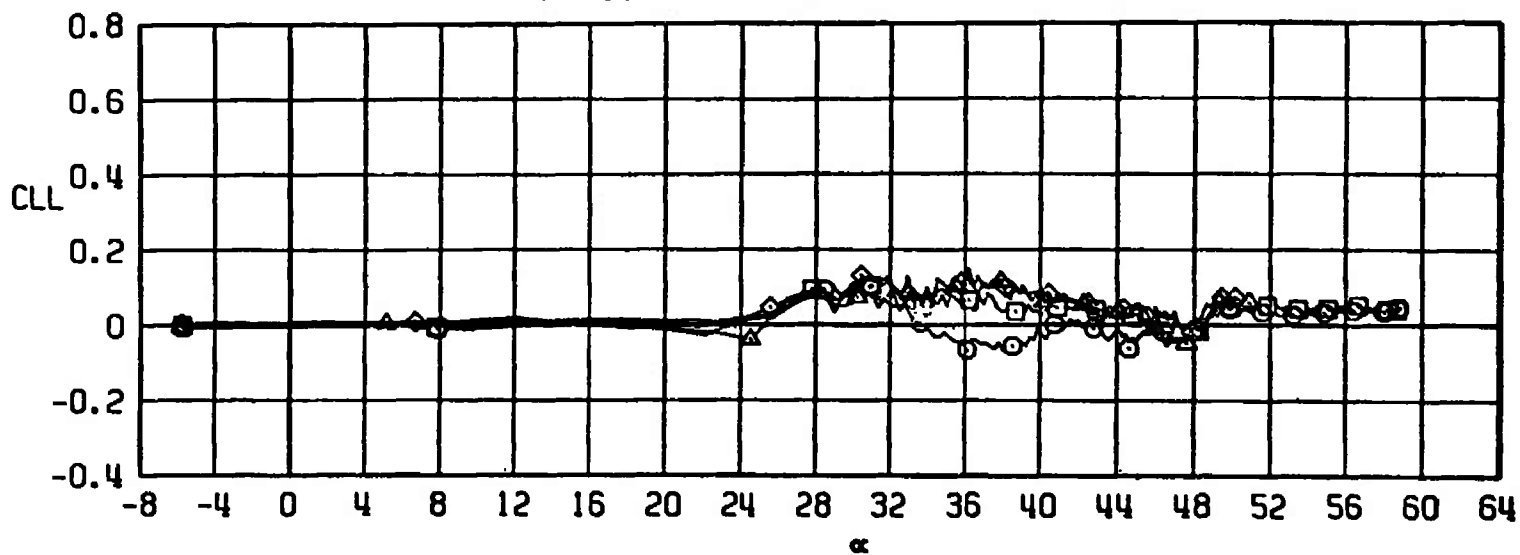
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



g. CLN versus α
Figure 46. Continued.

TEST CENTER NSRDC TEST 7

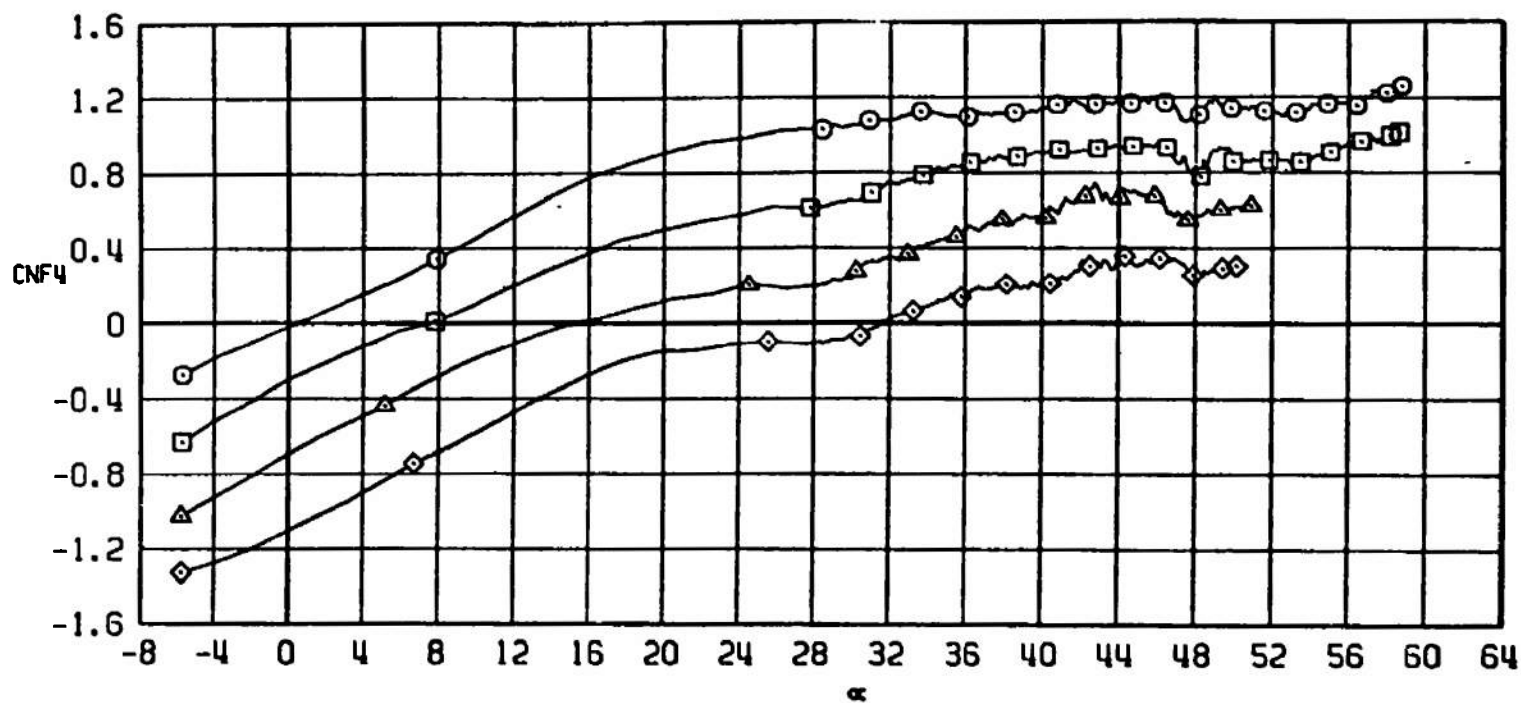
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



h. CLL versus α
Figure 46. Continued.

TEST CENTER NSRDC TEST 7

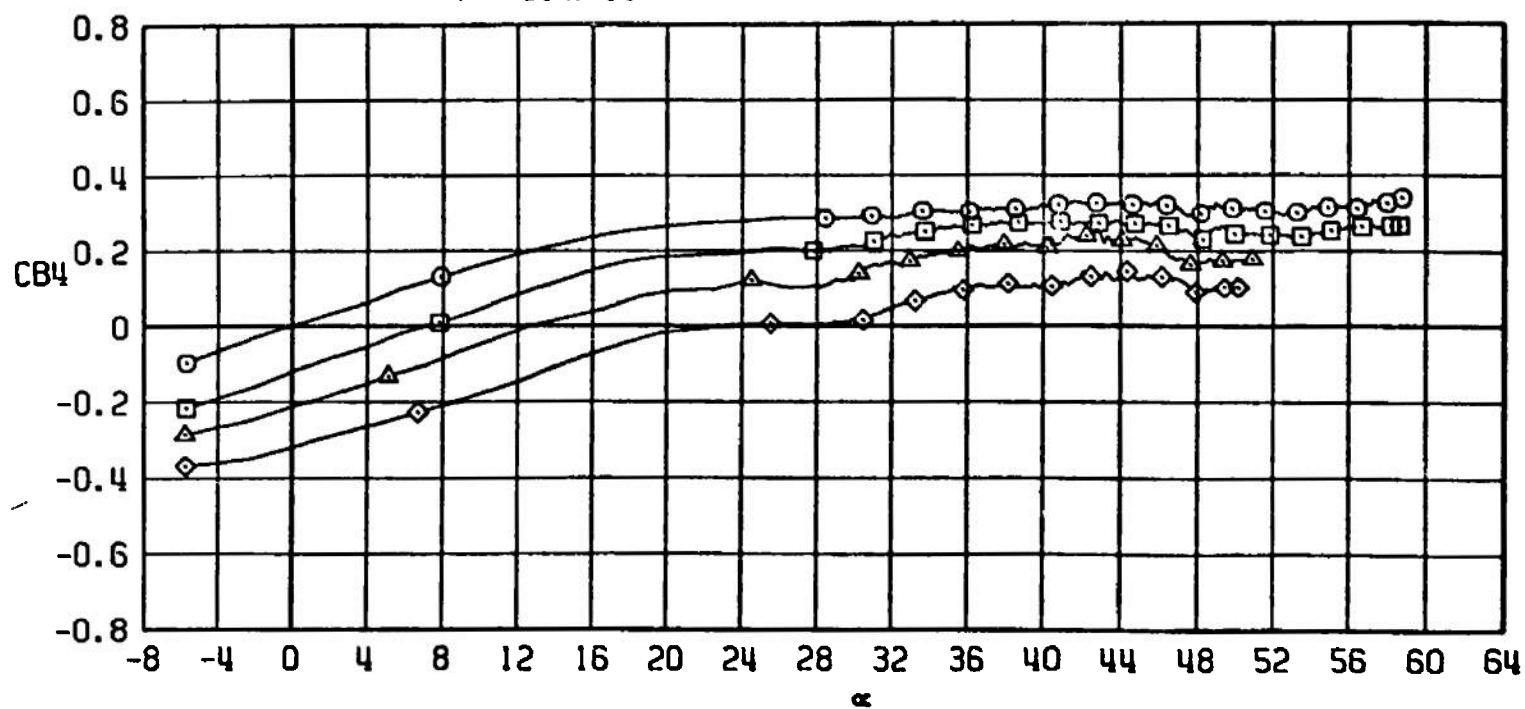
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 46. Continued.

TEST CENTER NSRDC TEST 7

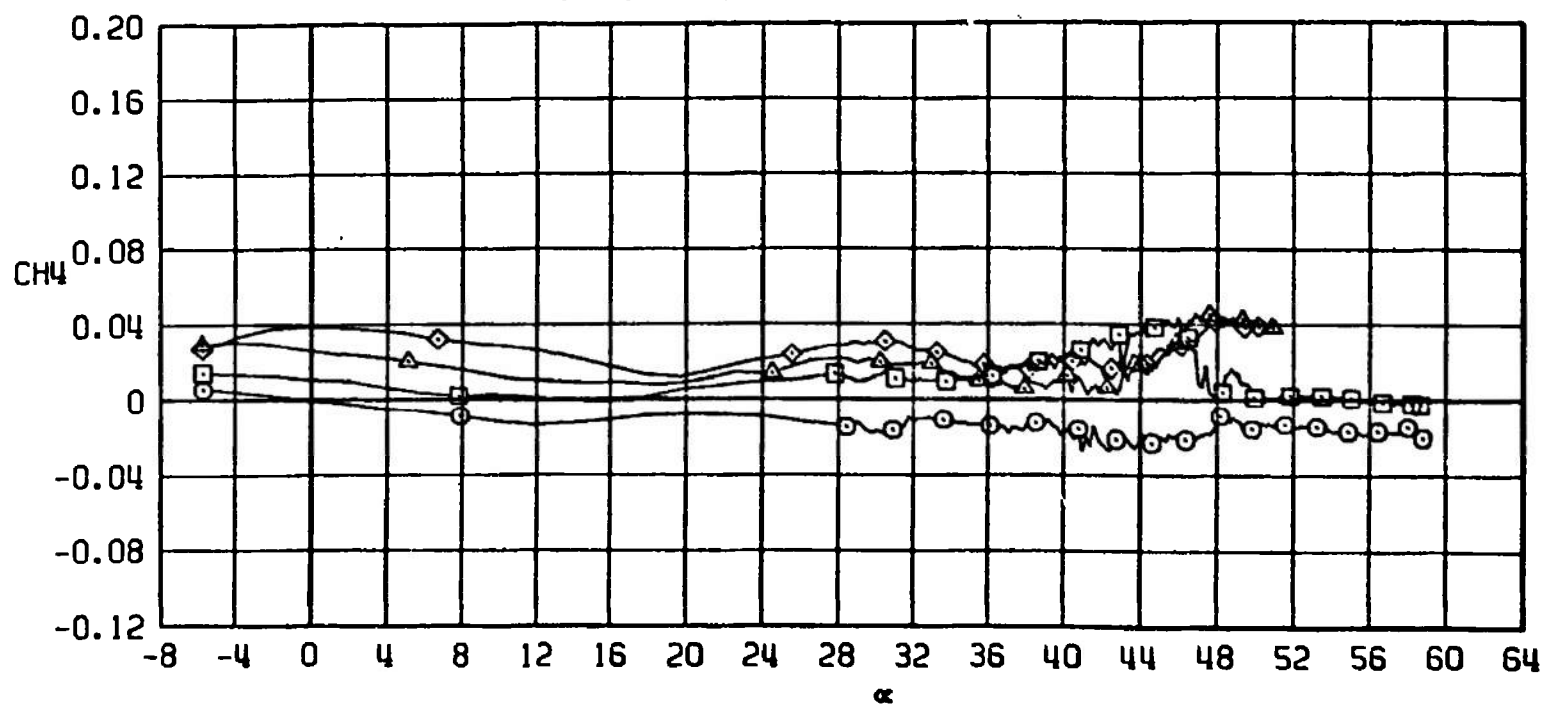
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF14	0	0	0	0	0	0
□	B1WOF14	0	0	-10	0	-10	0
△	B1WOF14	0	0	-20	0	-20	0
◇	B1WOF14	0	0	-30	0	-30	0



j. CB_4 versus α
Figure 46. Continued.

TEST CENTER NSRDC TEST 7

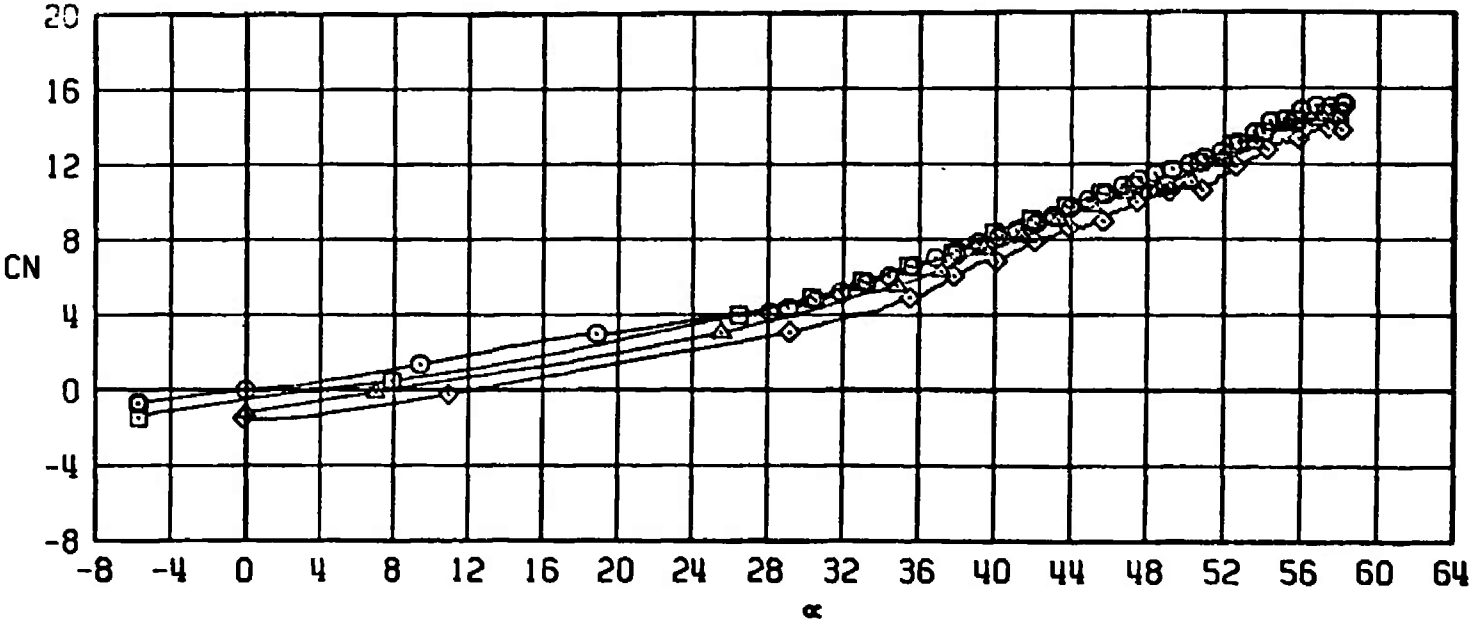
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF14	0	0	0	0	0	0
□	BIWOF14	0	0	-10	0	-10	0
△	BIWOF14	0	0	-20	0	-20	0
◇	BIWOF14	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 46. Concluded.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF15	0	0	0	0	0	0
□	B1WOF15	0	0	-10	0	-10	0
△	B1WOF15	0	0	-20	0	-20	0
◇	B1WOF15	0	0	-30	0	-30	0

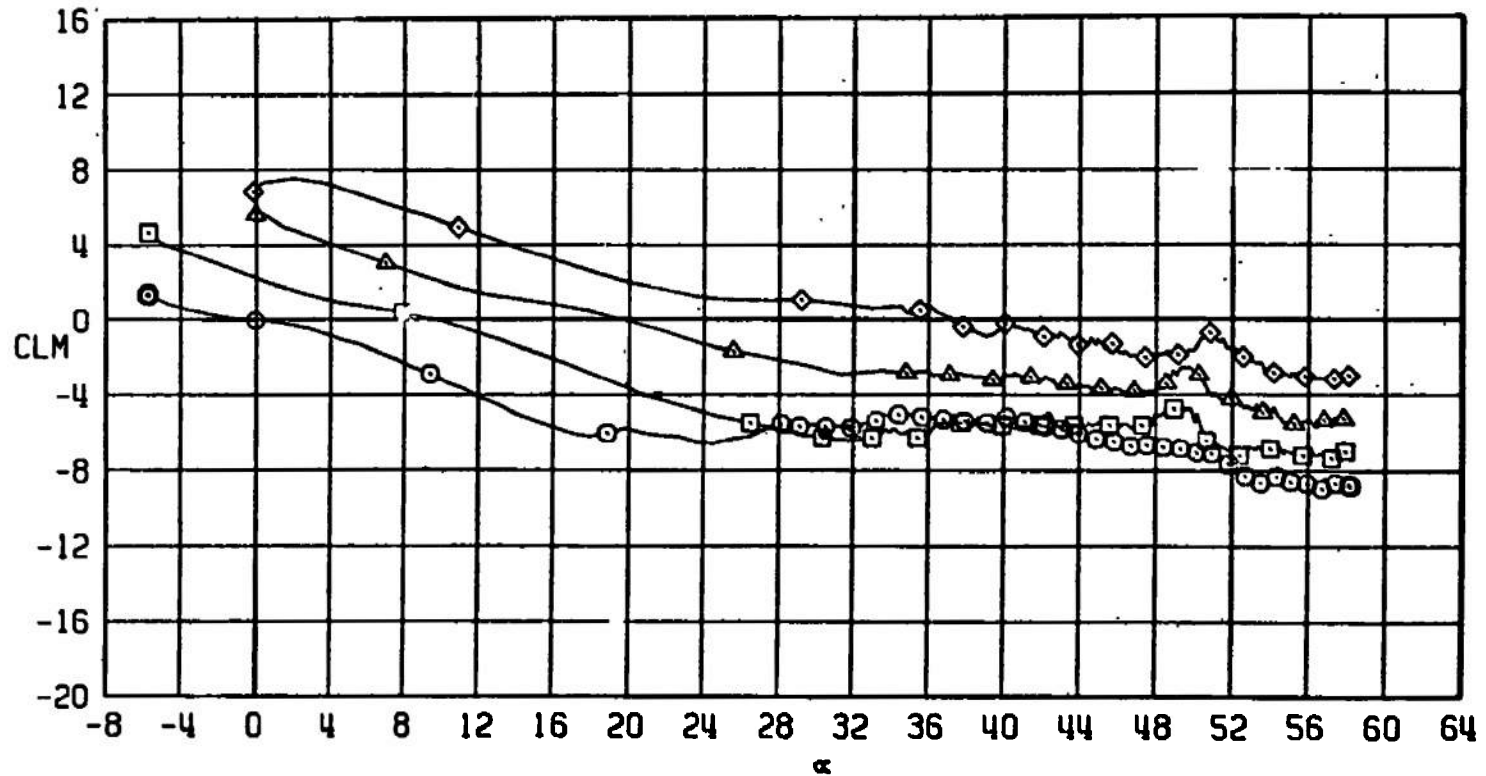


a. C_N versus α

Figure 47. Test No. 7, comparison of aerodynamic coefficients of configuration B1WOF15 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.8$.

TEST CENTER NSROC TEST 7

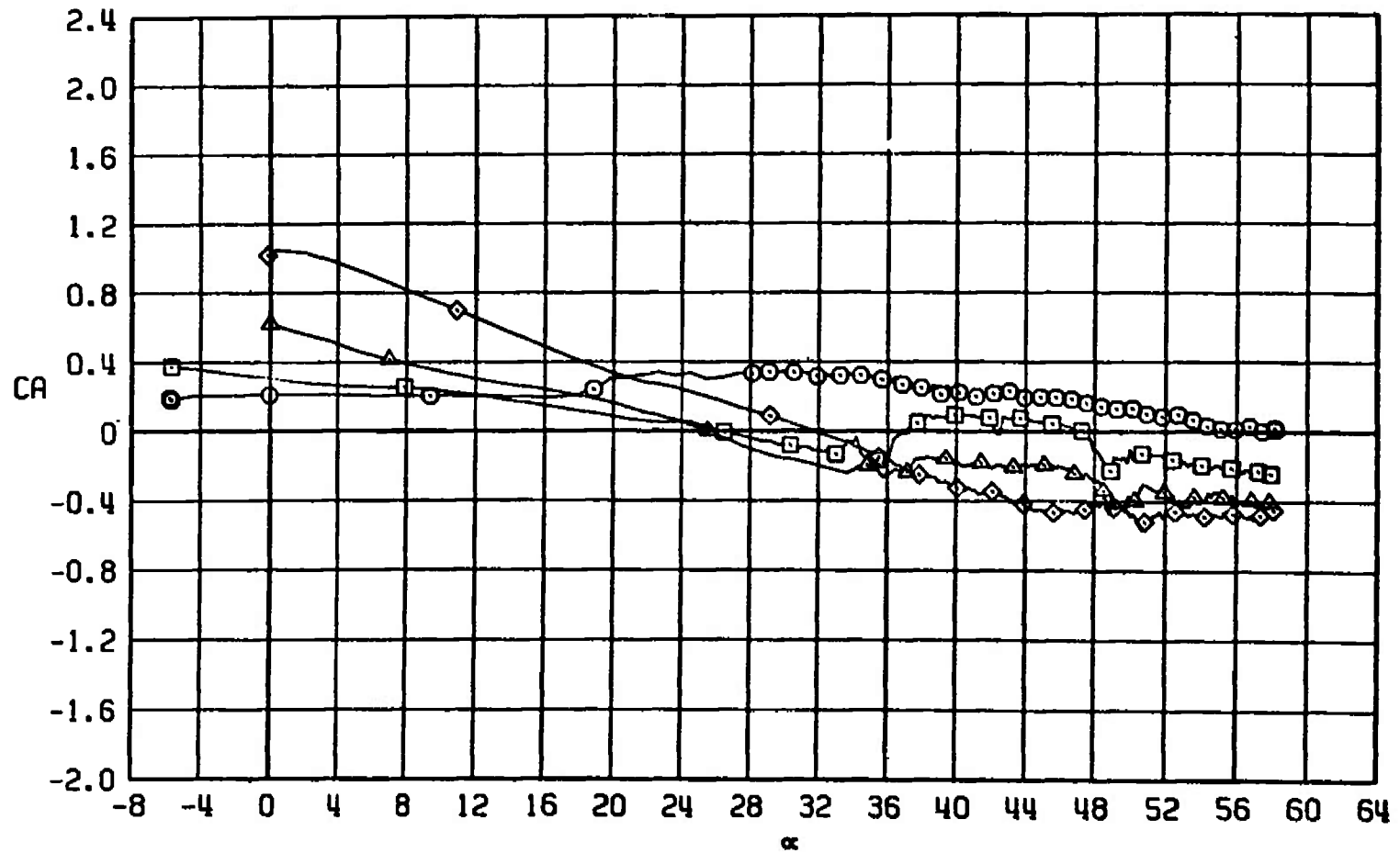
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



b. CLM versus α
Figure 47. Continued.

TEST CENTER NSRDC TEST 7

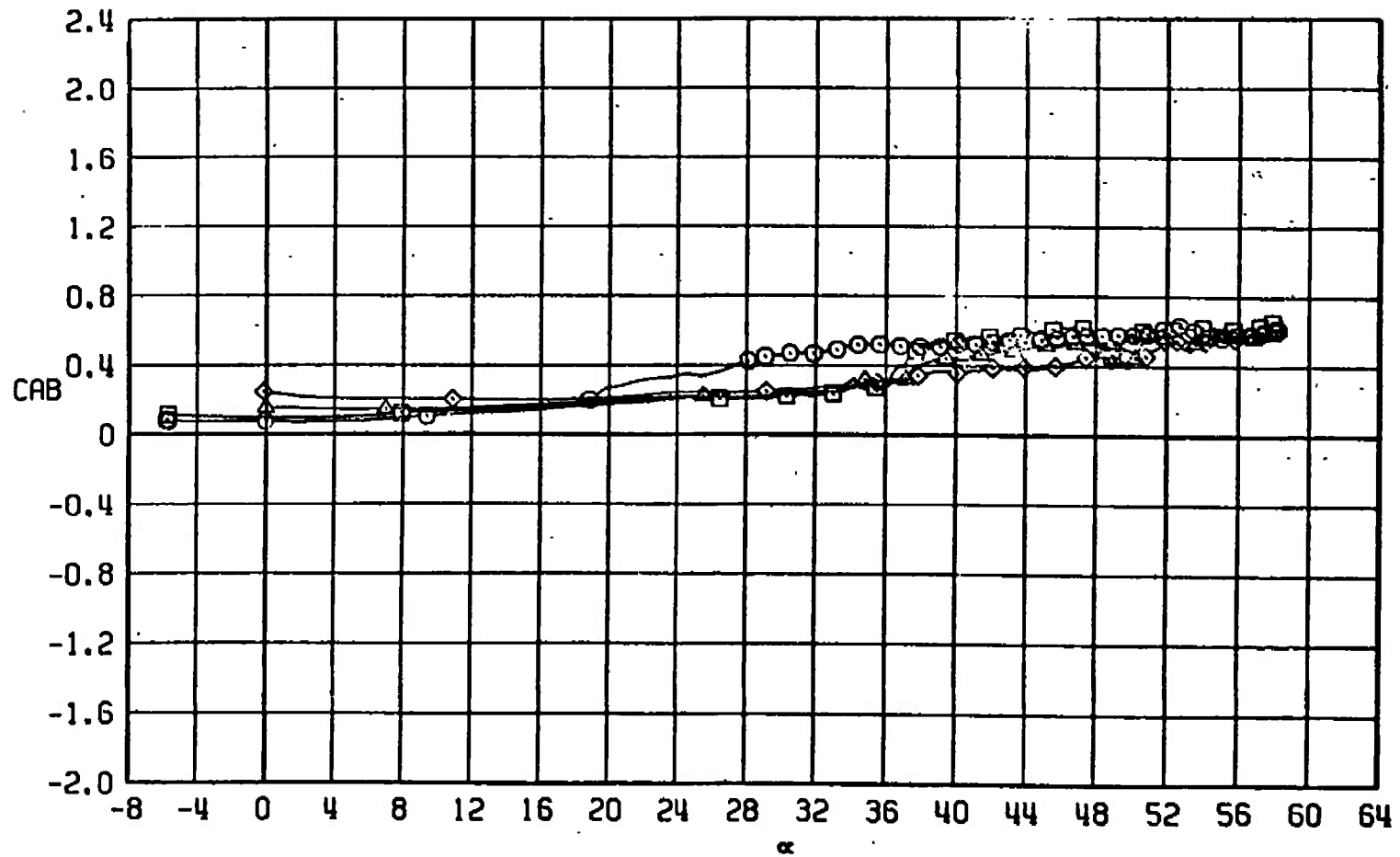
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



c. CA versus α
Figure 47. Continued.

TEST CENTER NSRDC TEST 7

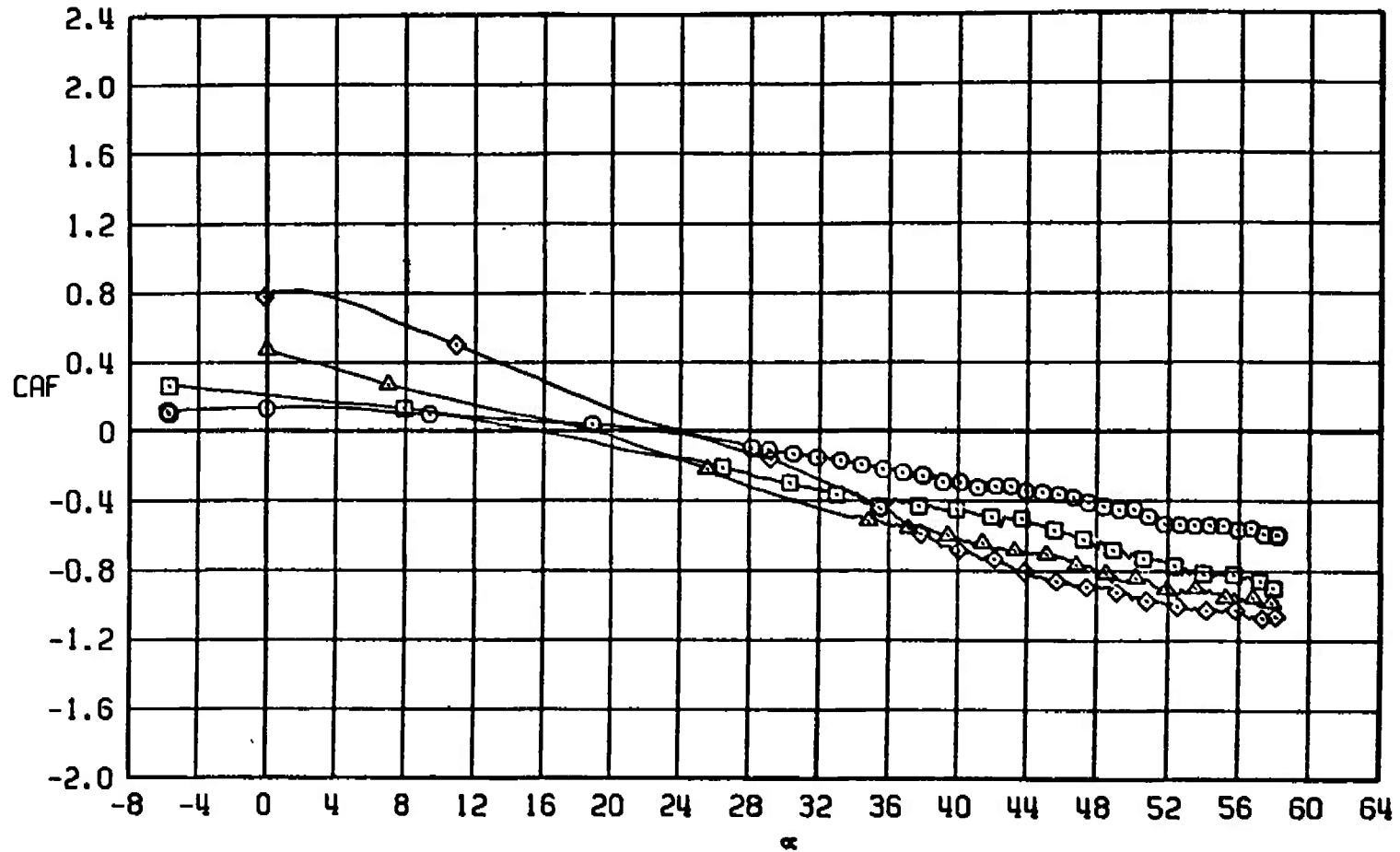
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



d. CAB versus α
Figure 47. Continued.

TEST CENTER NSRDC TEST 7

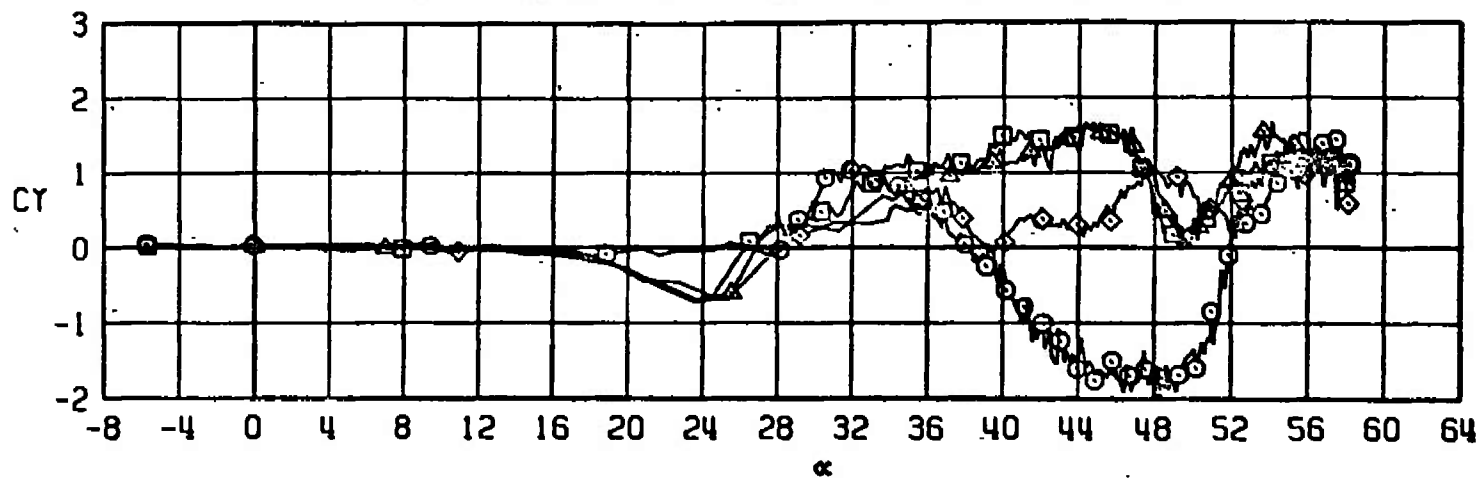
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



e. CAF versus α
Figure 47. Continued.

TEST CENTER NSRDC TEST 7

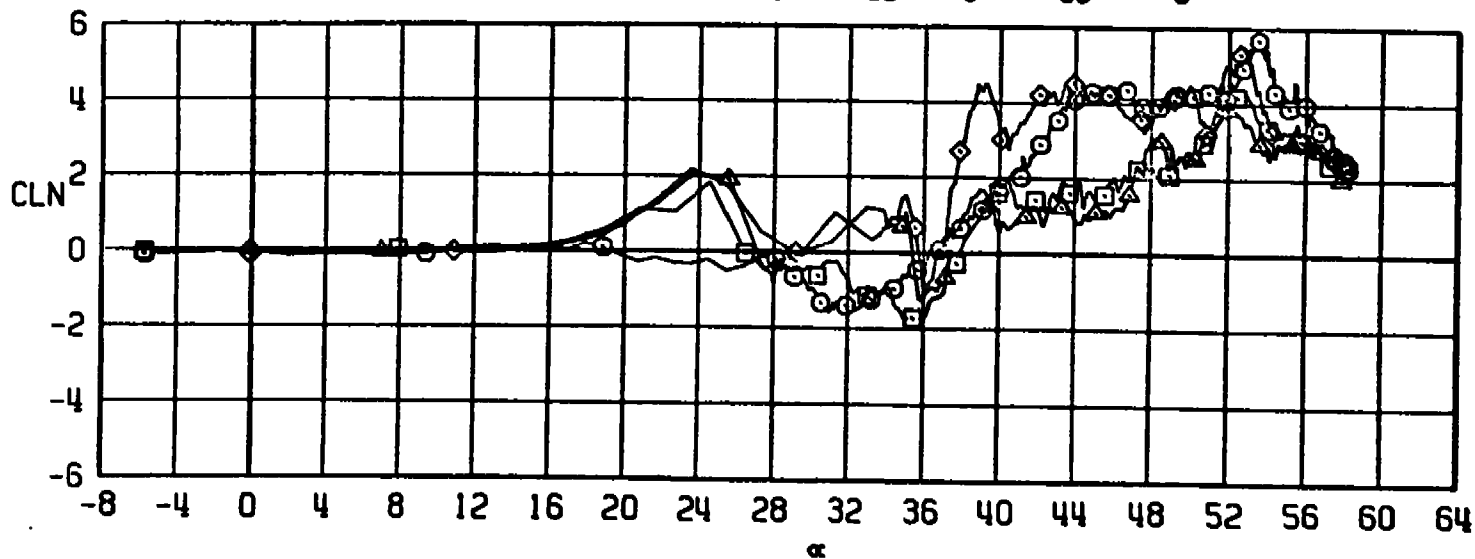
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



f. CY versus α
Figure 47. Continued.

TEST CENTER NSRDC TEST 7

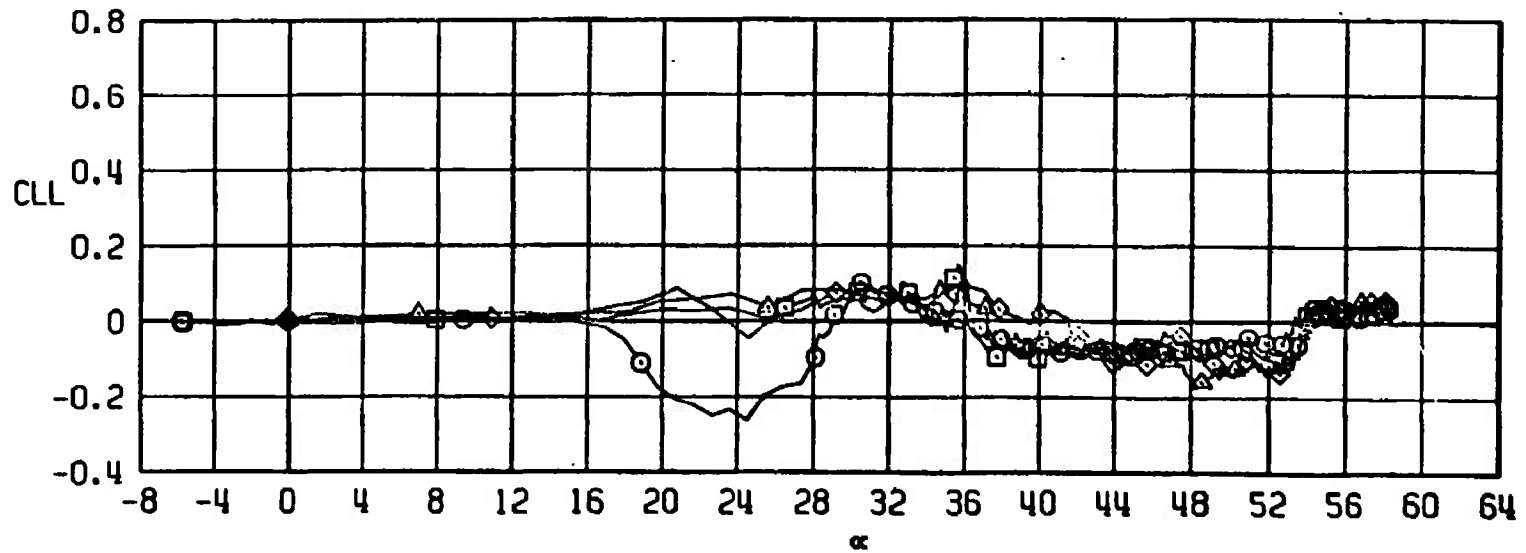
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



g. CLN versus α
Figure 47. Continued.

TEST CENTER NSRDC TEST 7

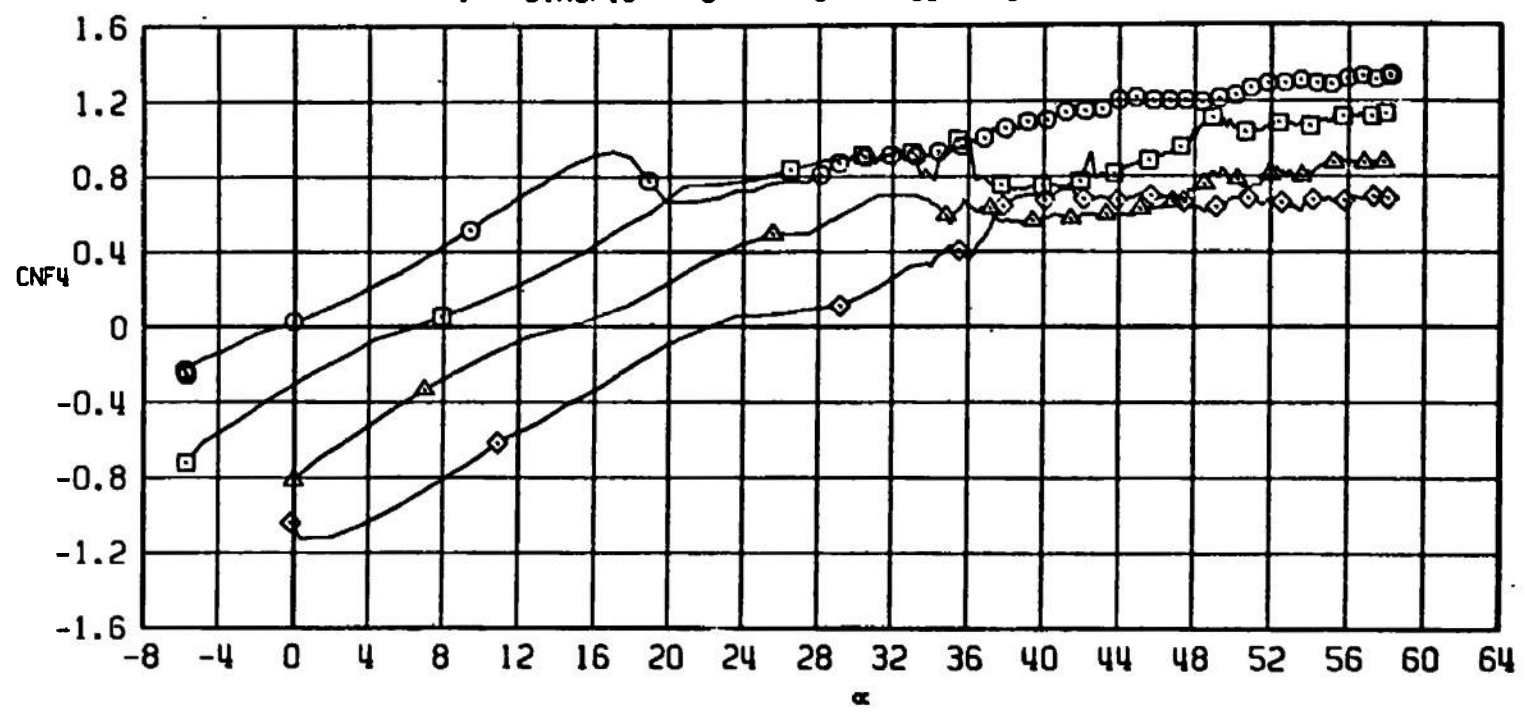
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



h. CLL versus α
Figure 47. Continued.

TEST CENTER NSRDC TEST 7

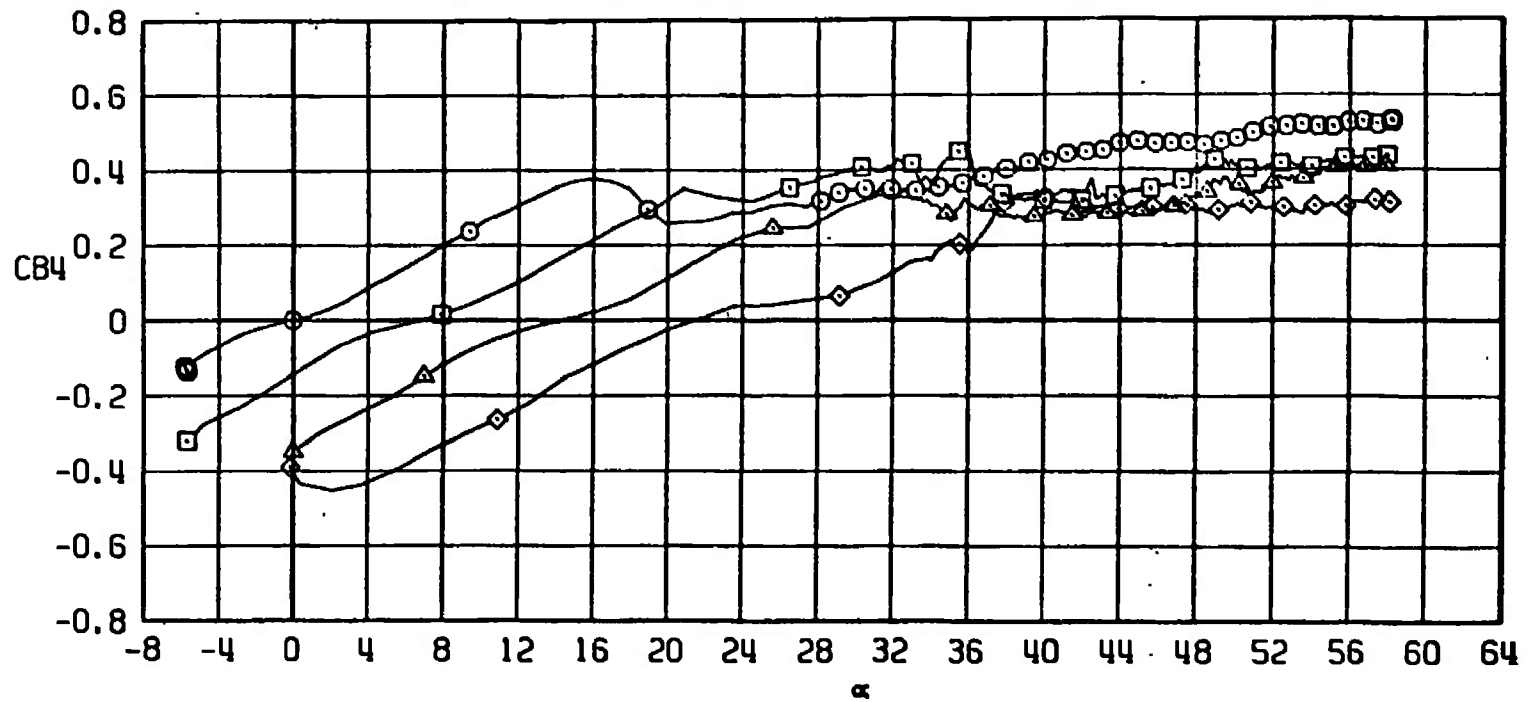
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 47. Continued.

TEST CENTER NSRDC TEST 7

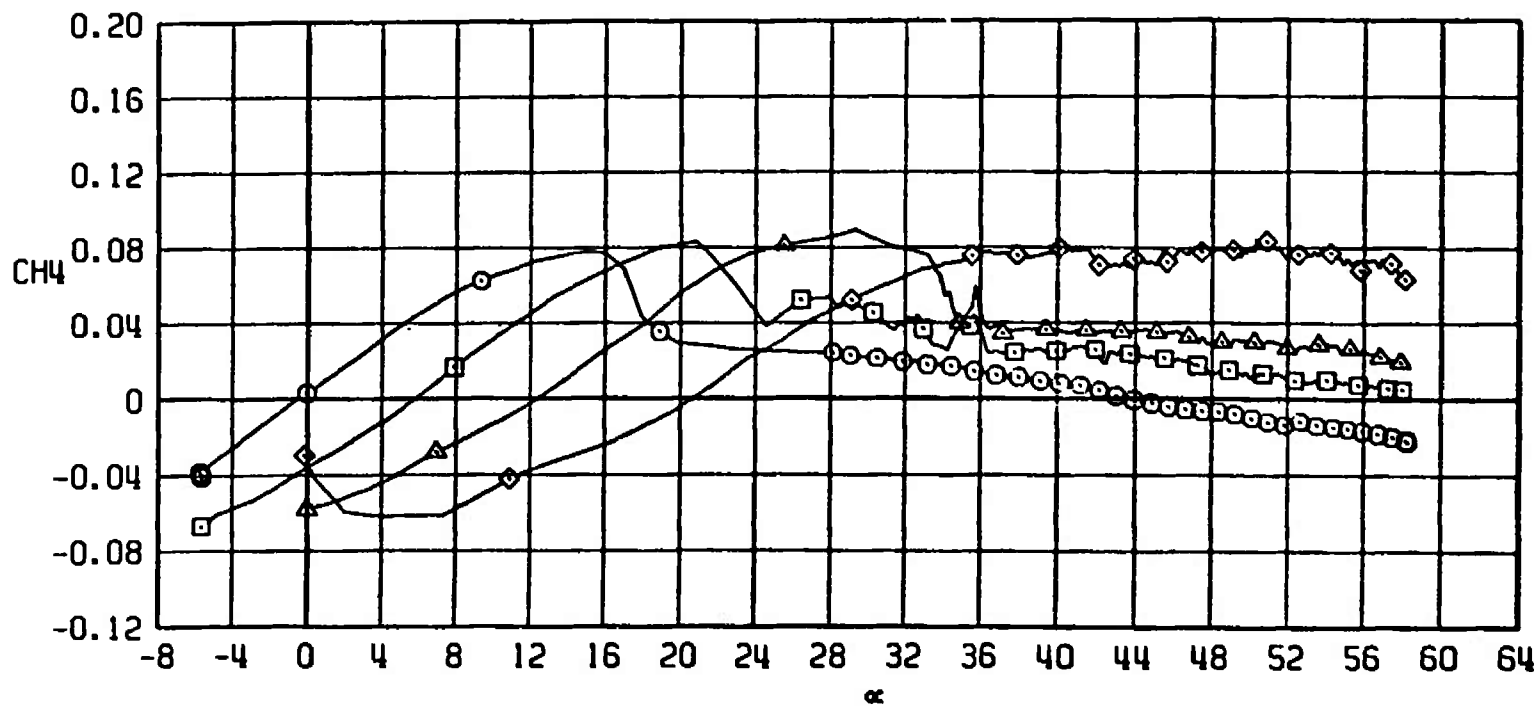
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



j. CB4 versus α
Figure 47. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 47. Continued.

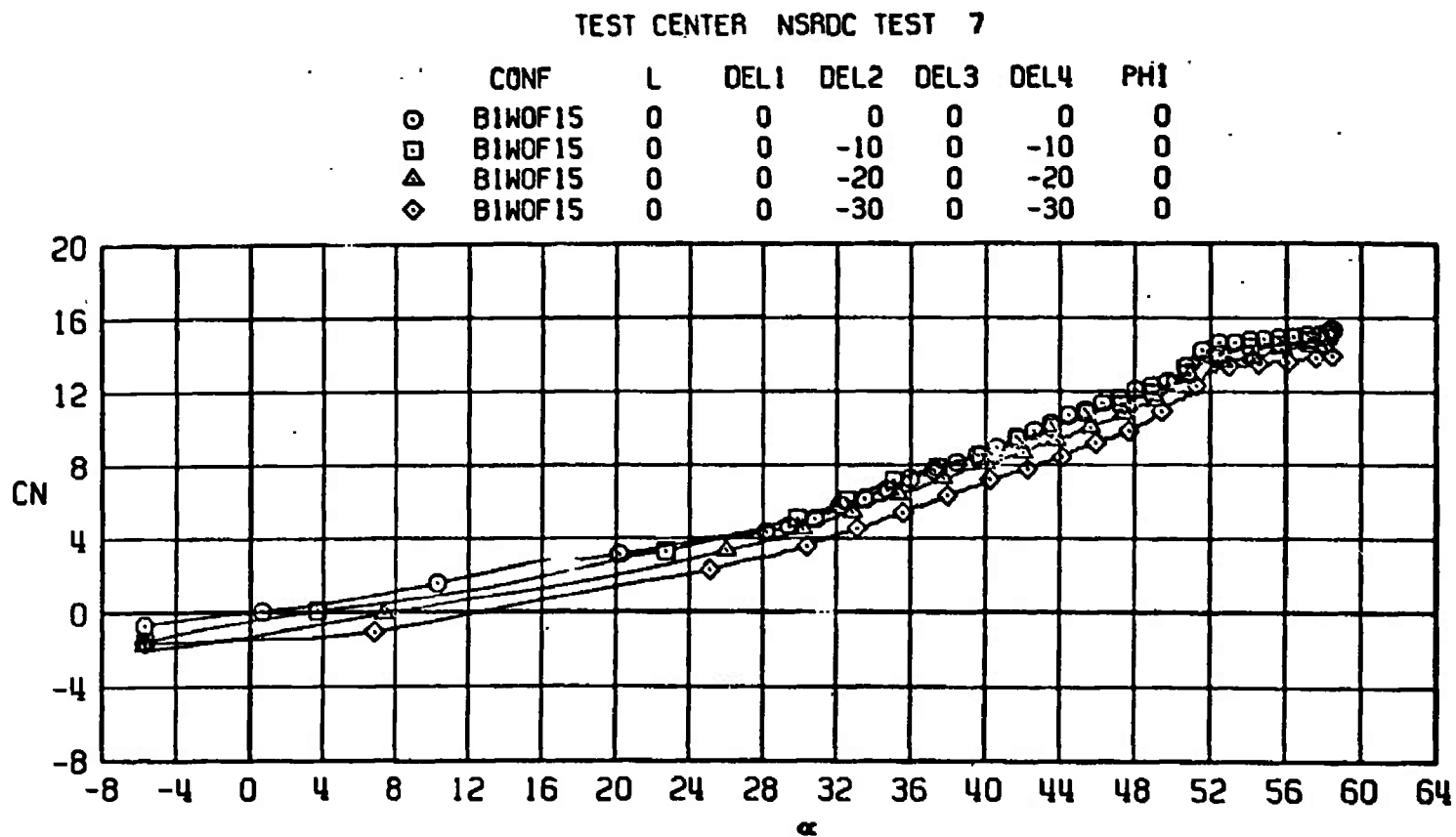
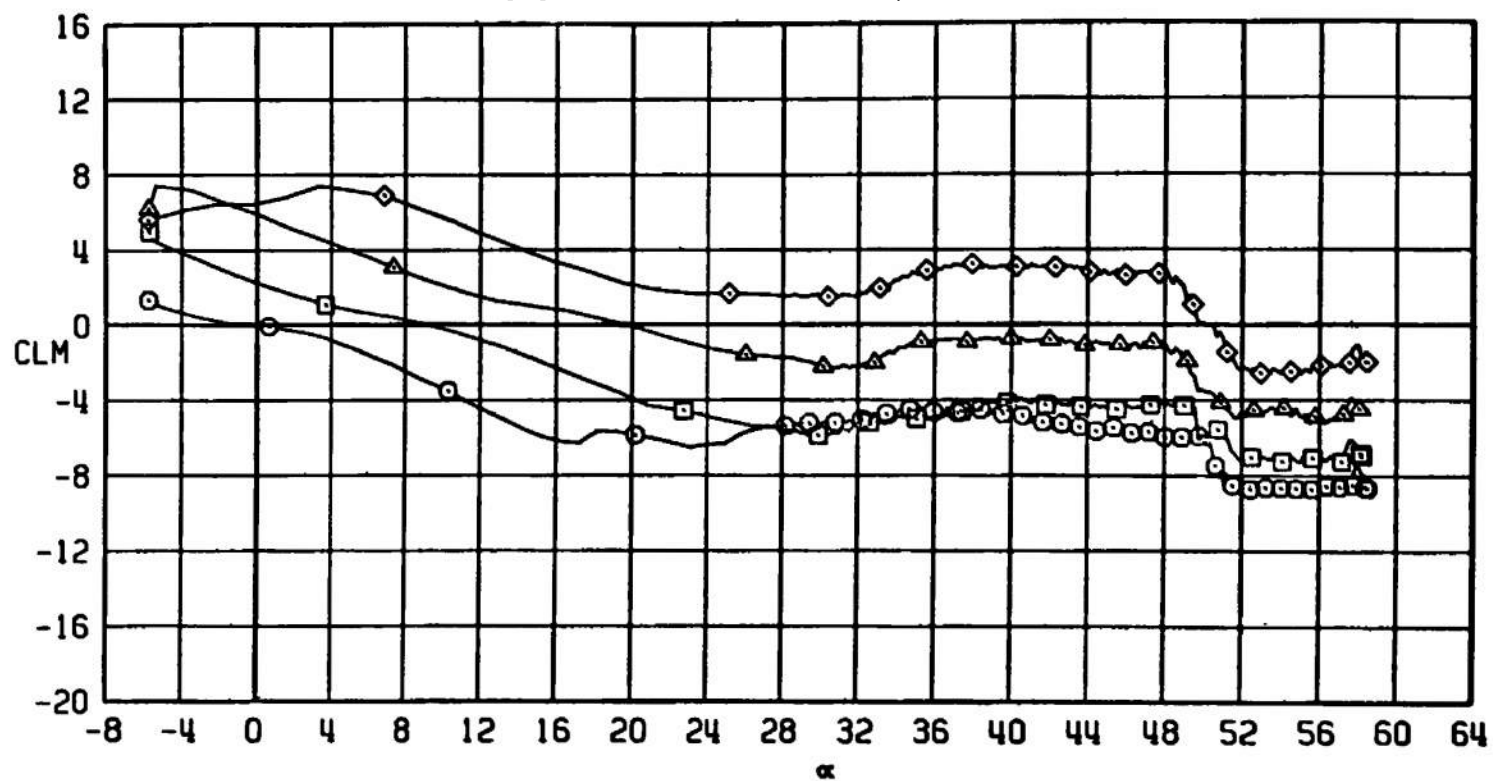
a. CN versus α

Figure 48. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F15 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.9$.

TEST CENTER NSRDC TEST 7

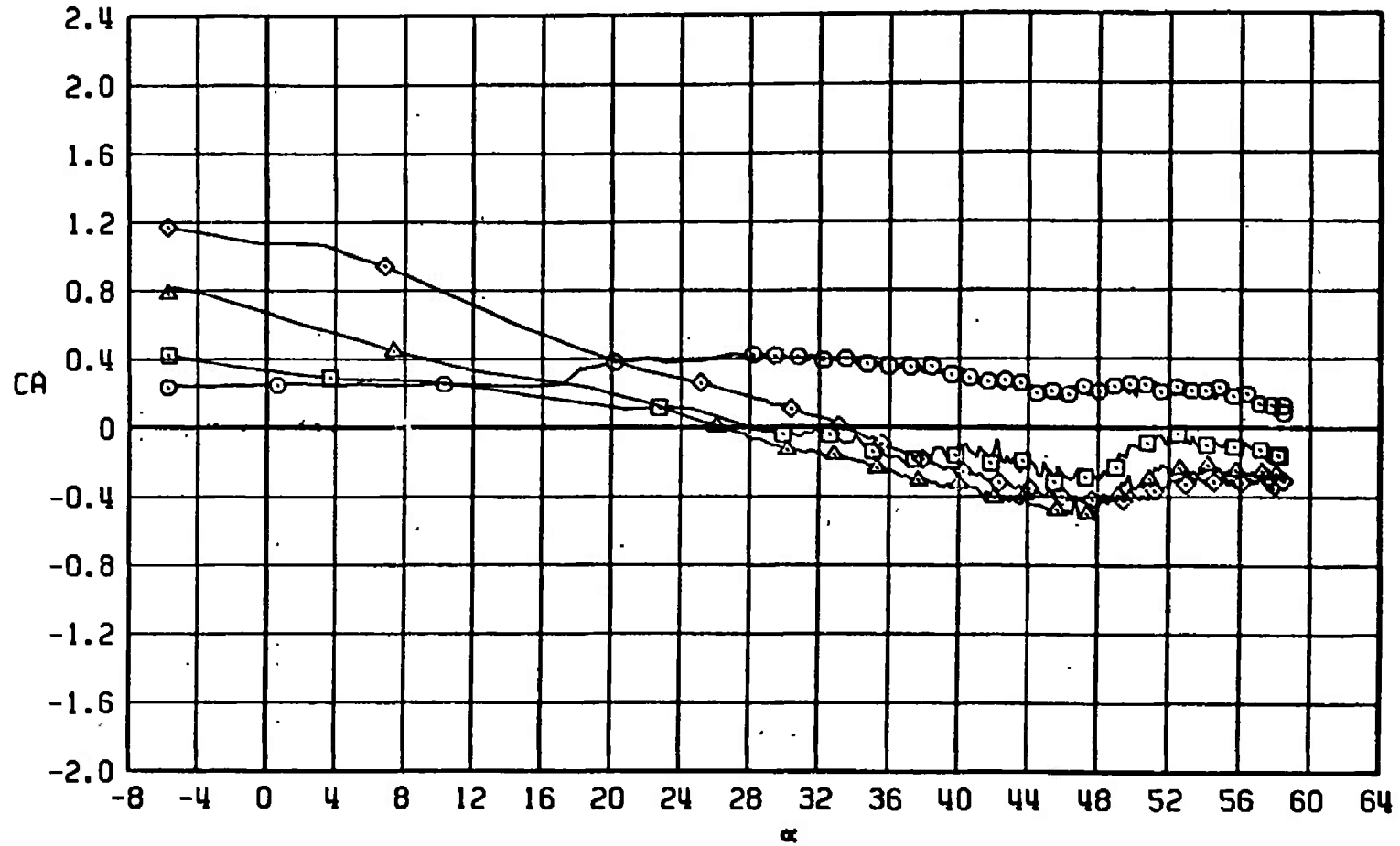
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF15	0	0	0	0	0	0
□	81WOF15	0	0	-10	0	-10	0
△	81WOF15	0	0	-20	0	-20	0
◇	81WOF15	0	0	-30	0	-30	0



b. CLM versus α
Figure 48. Continued.

TEST CENTER NSRDC TEST 7

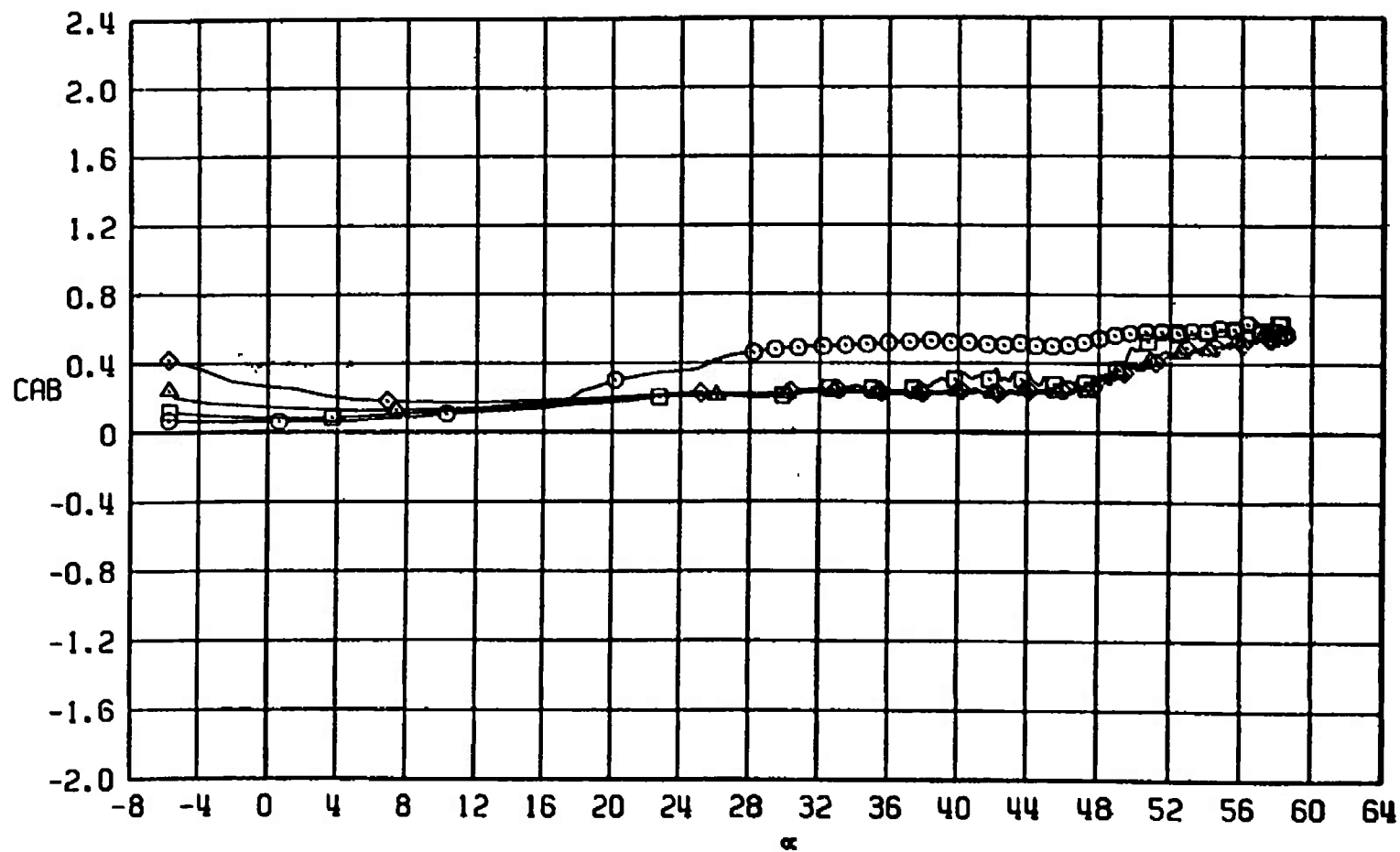
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



c. CA versus α
Figure 48. Continued.

TEST CENTER NSRDC TEST 7

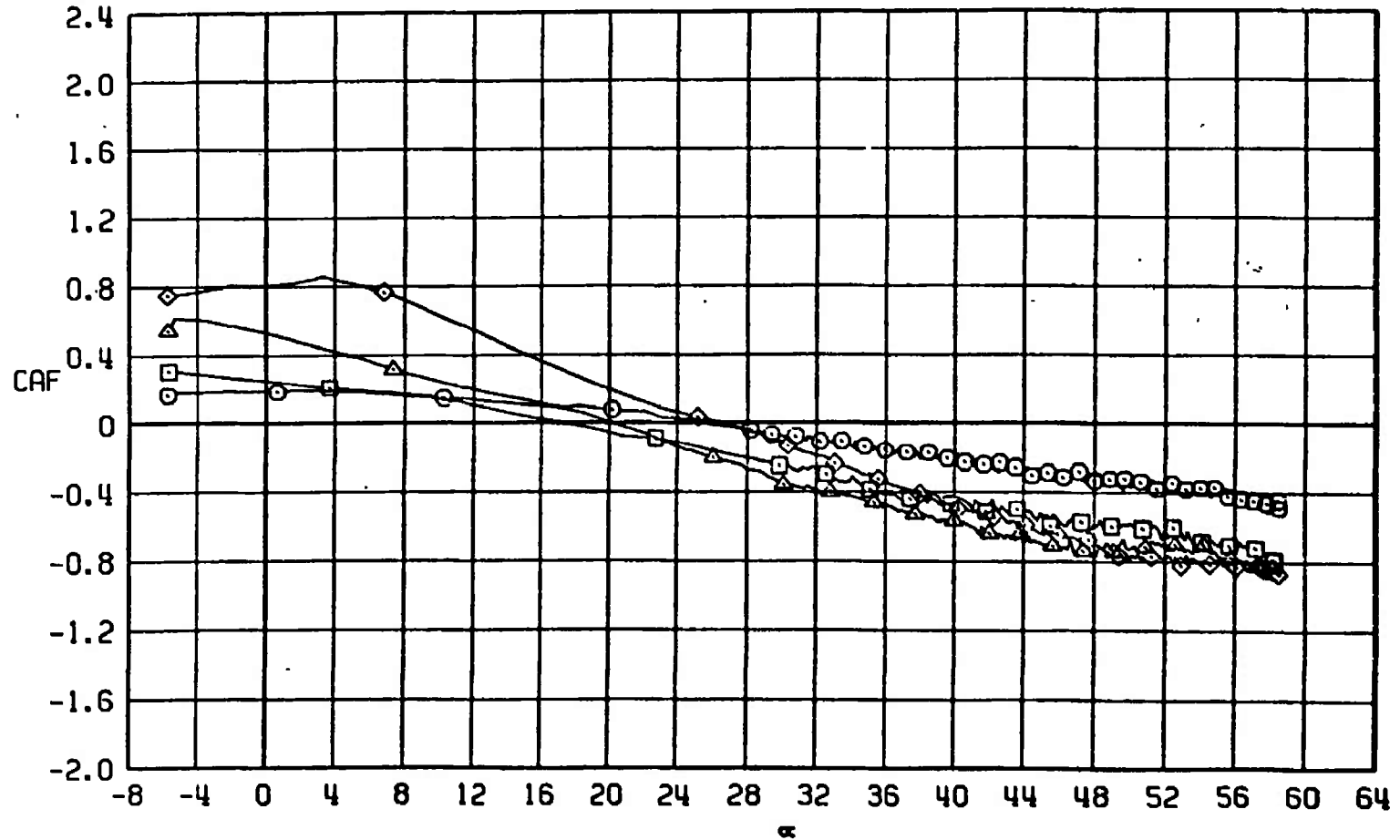
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



d. CAB versus α
Figure 48. Continued.

TEST CENTER NSRDC TEST 7

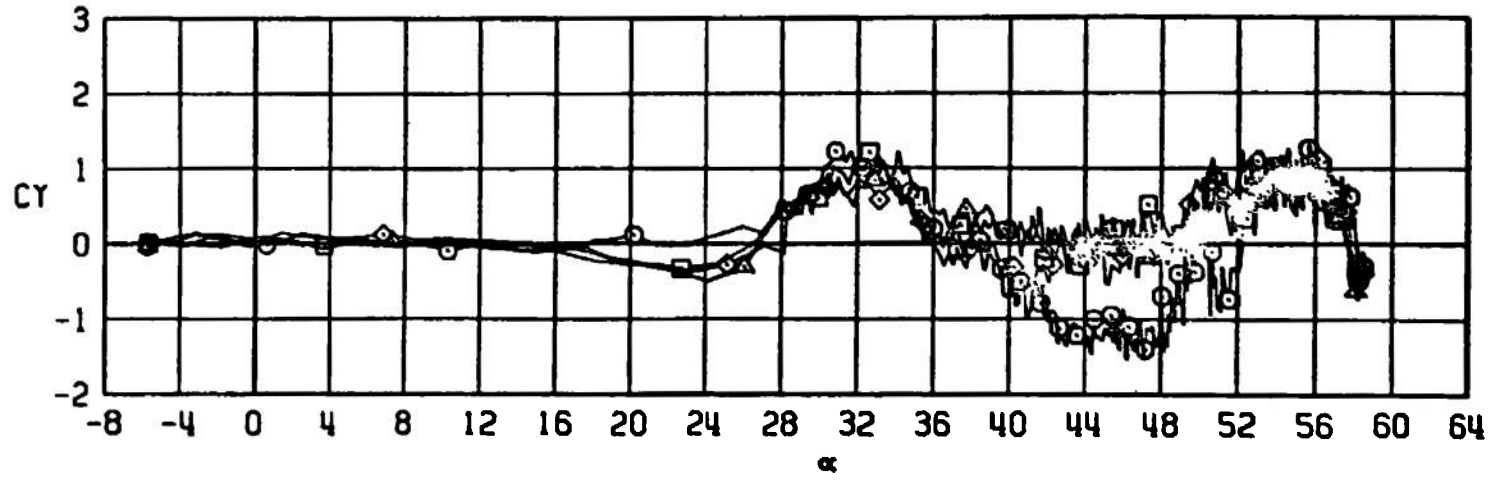
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



e. CAF versus α
Figure 48. Continued.

TEST CENTER NSROC TEST 7

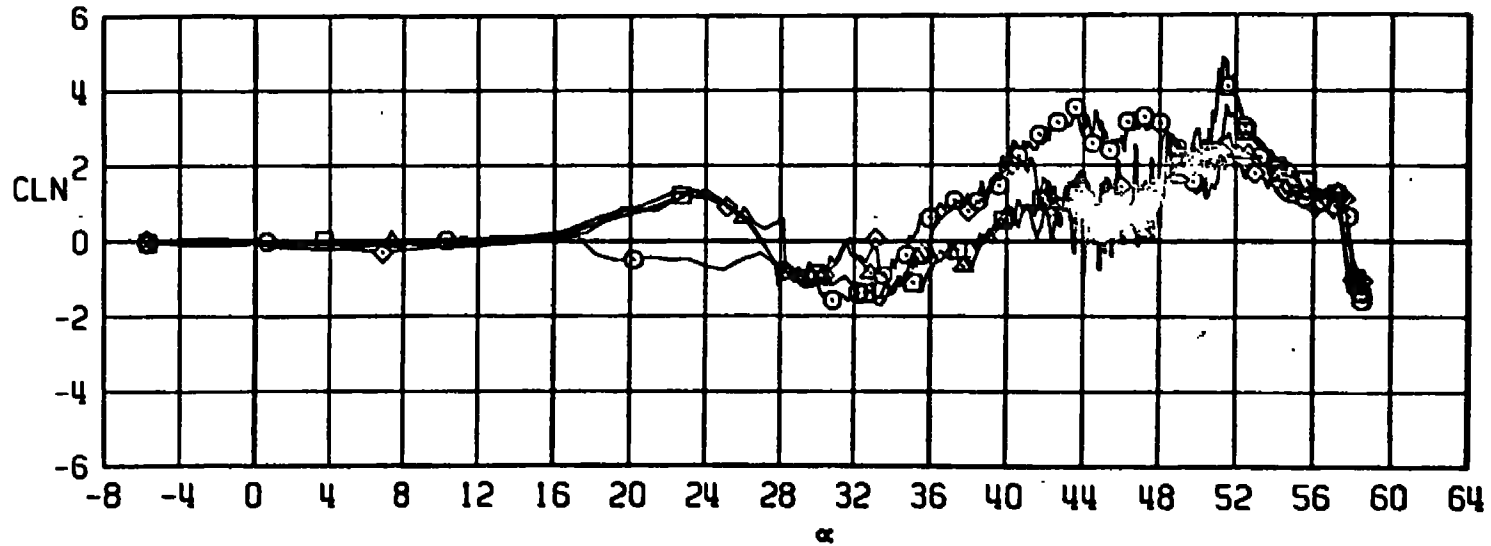
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF15	0	0	0	0	0	0
⊠	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



f. CY versus α
Figure 48. Continued.

TEST CENTER NSRDC TEST 7

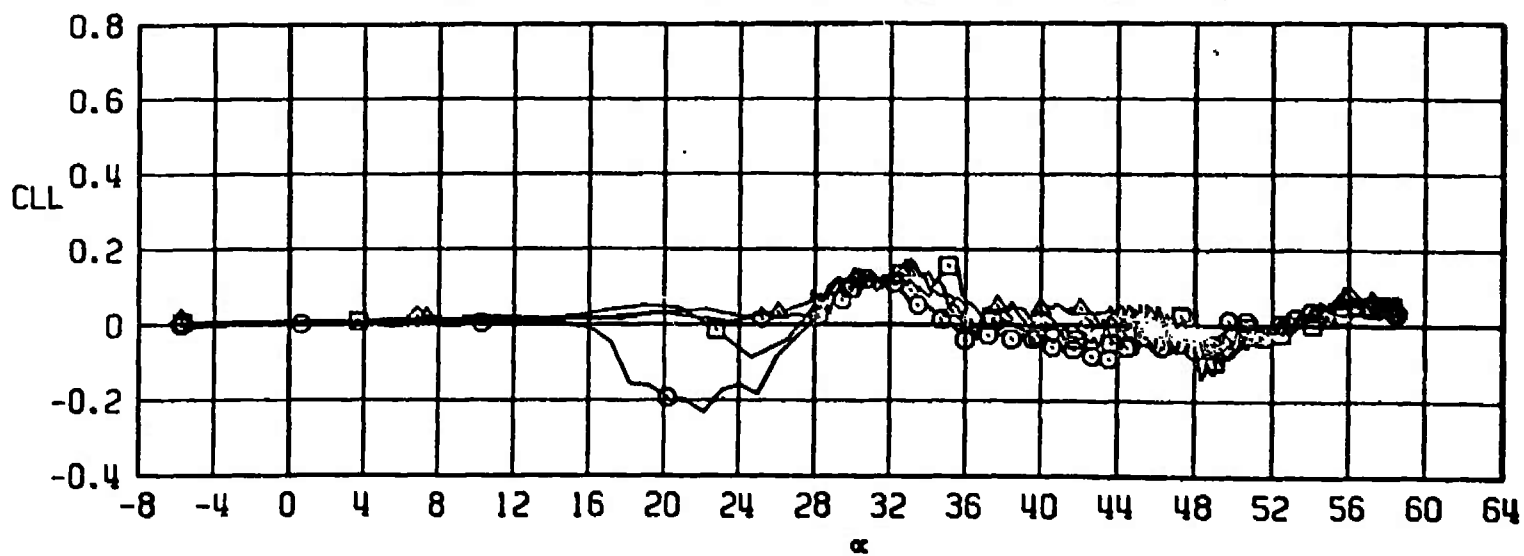
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF15	0	0	0	0	0	0
⊠	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



g. CLN versus α
Figure 48. Continued.

TEST CENTER NSRDC TEST 7

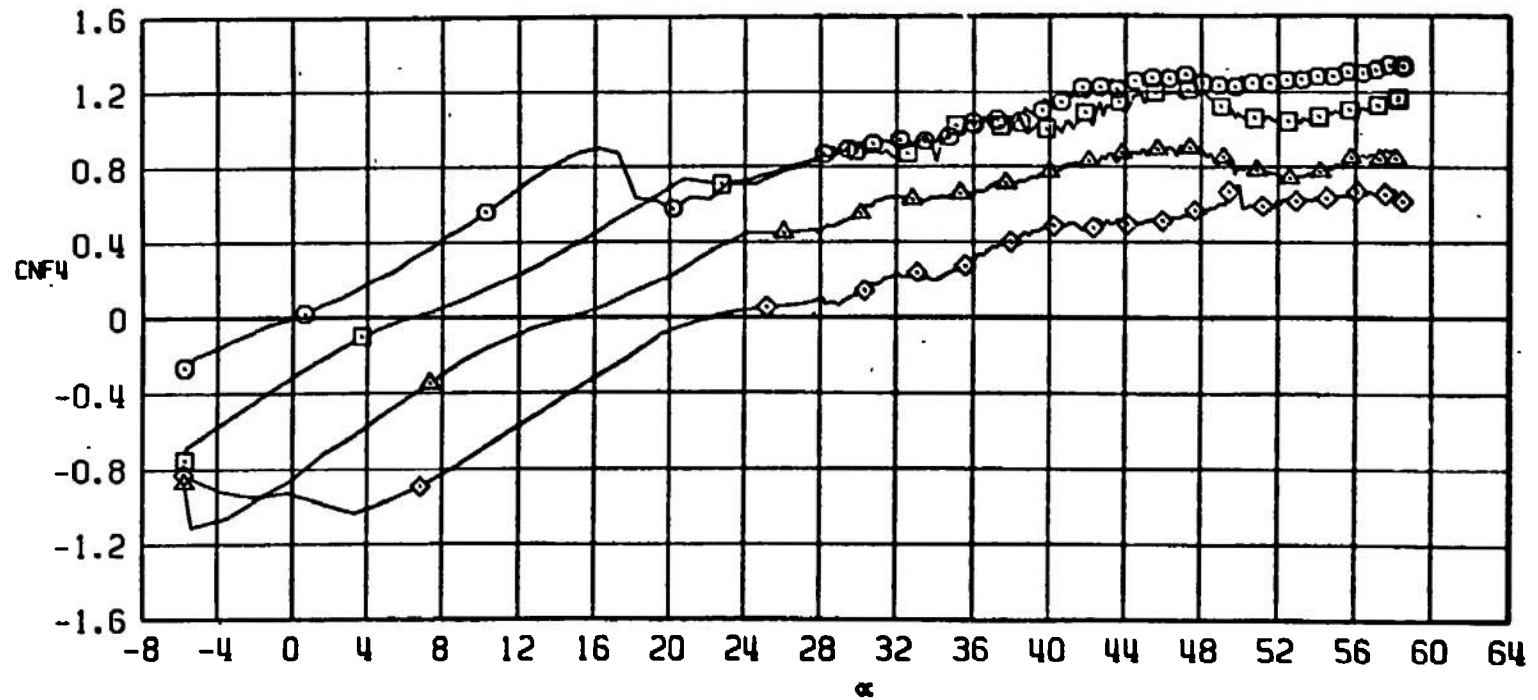
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



h. CLL versus α
Figure 48. Continued.

TEST CENTER NSRDC TEST 7

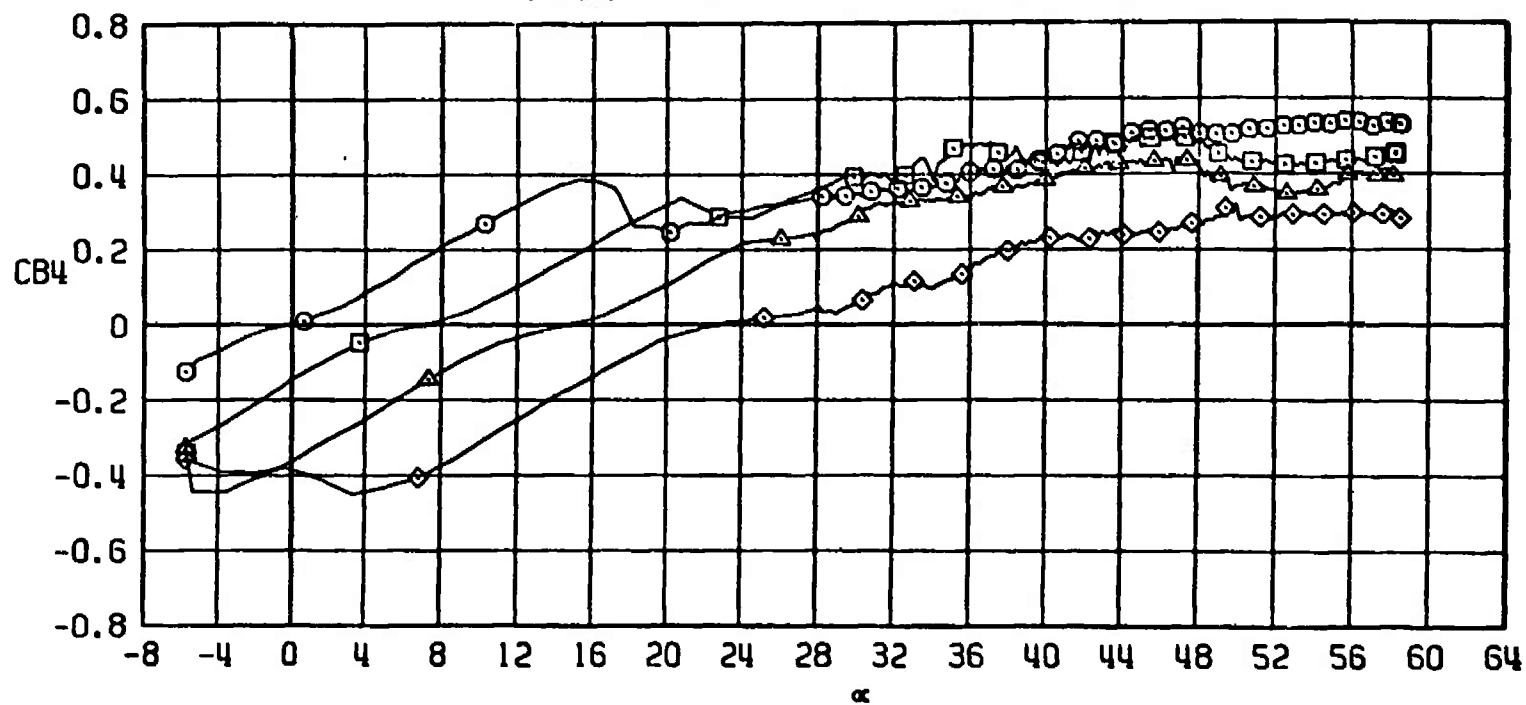
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 48. Continued.

TEST CENTER NSROC TEST 7

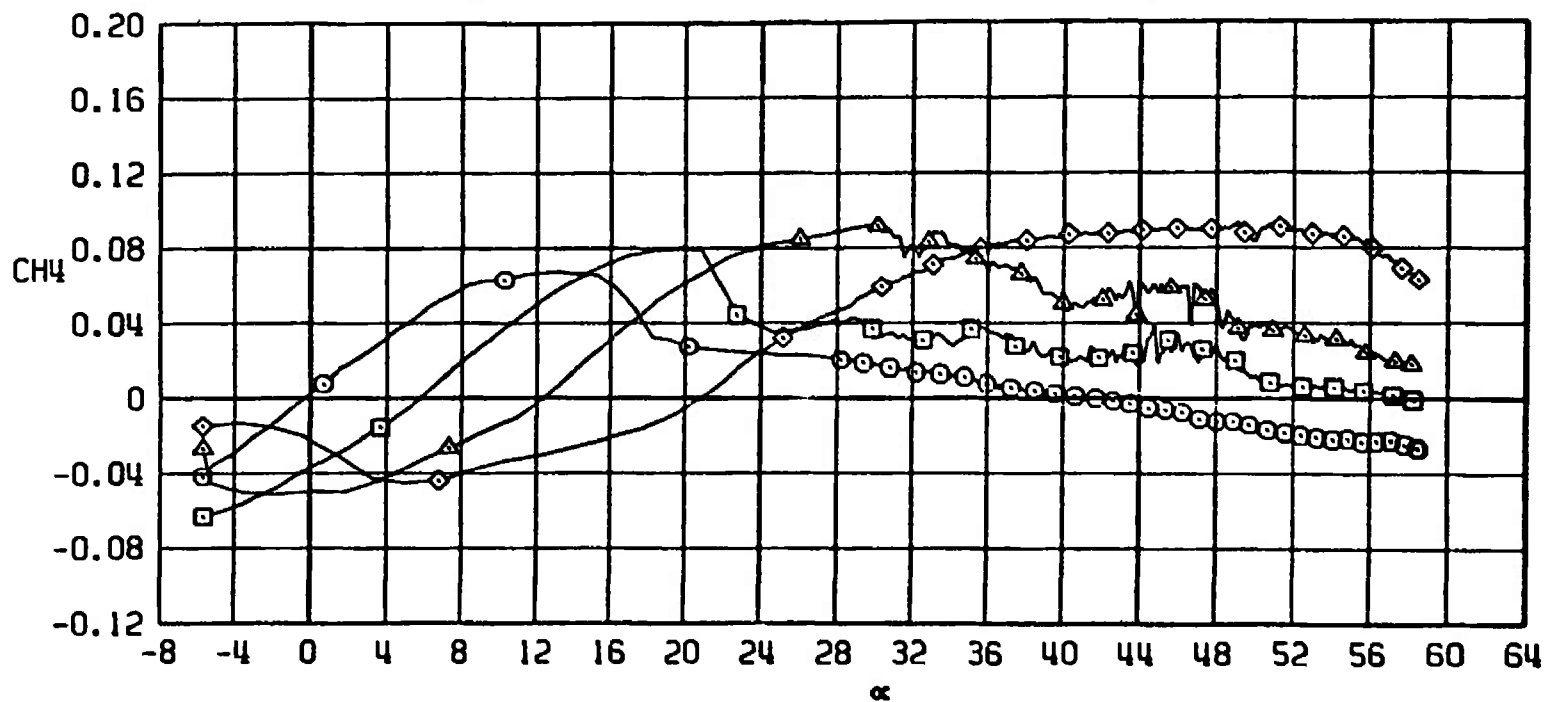
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



j. CB_4 versus α
Figure 48. Continued.

TEST CENTER NSROC TEST 7

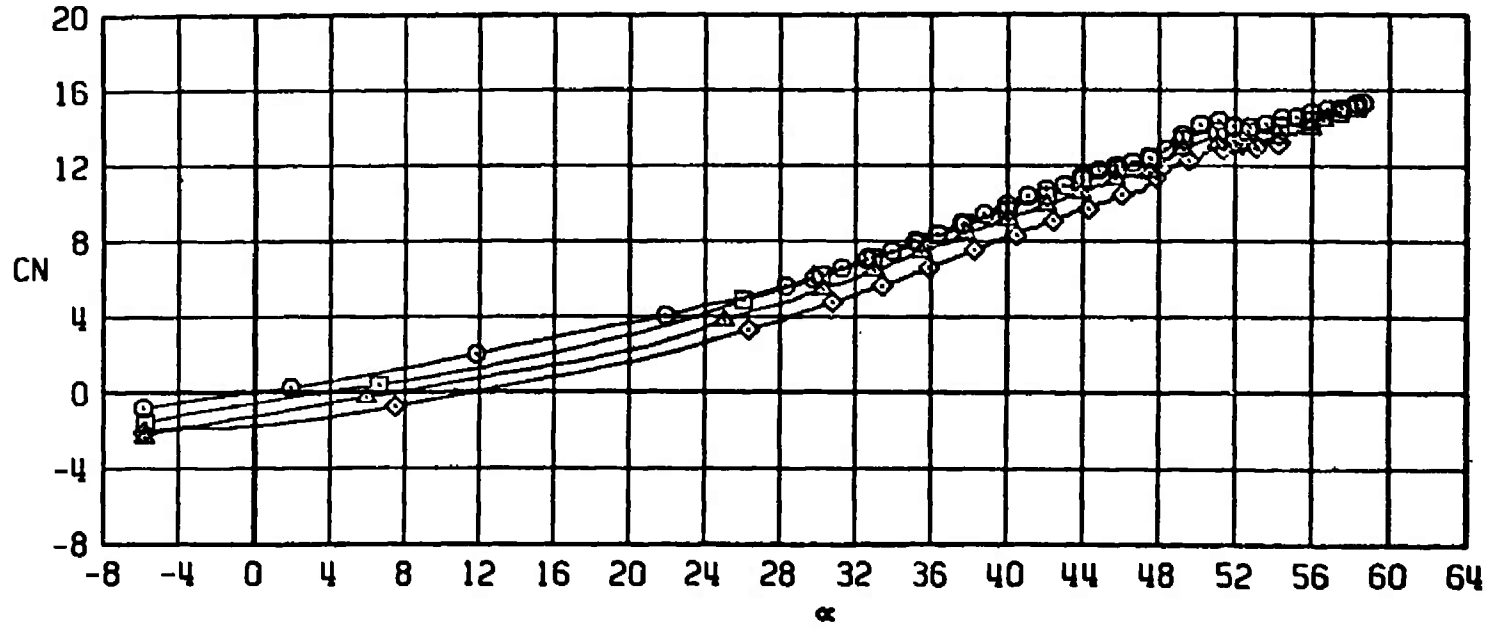
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



k. CH_4 versus α
Figure 48. Concluded.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F15	0	0	0	0	0	0
□	B1W0F15	0	0	-10	0	-10	0
△	B1W0F15	0	0	-20	0	-20	0
◇	B1W0F15	0	0	-30	0	-30	0

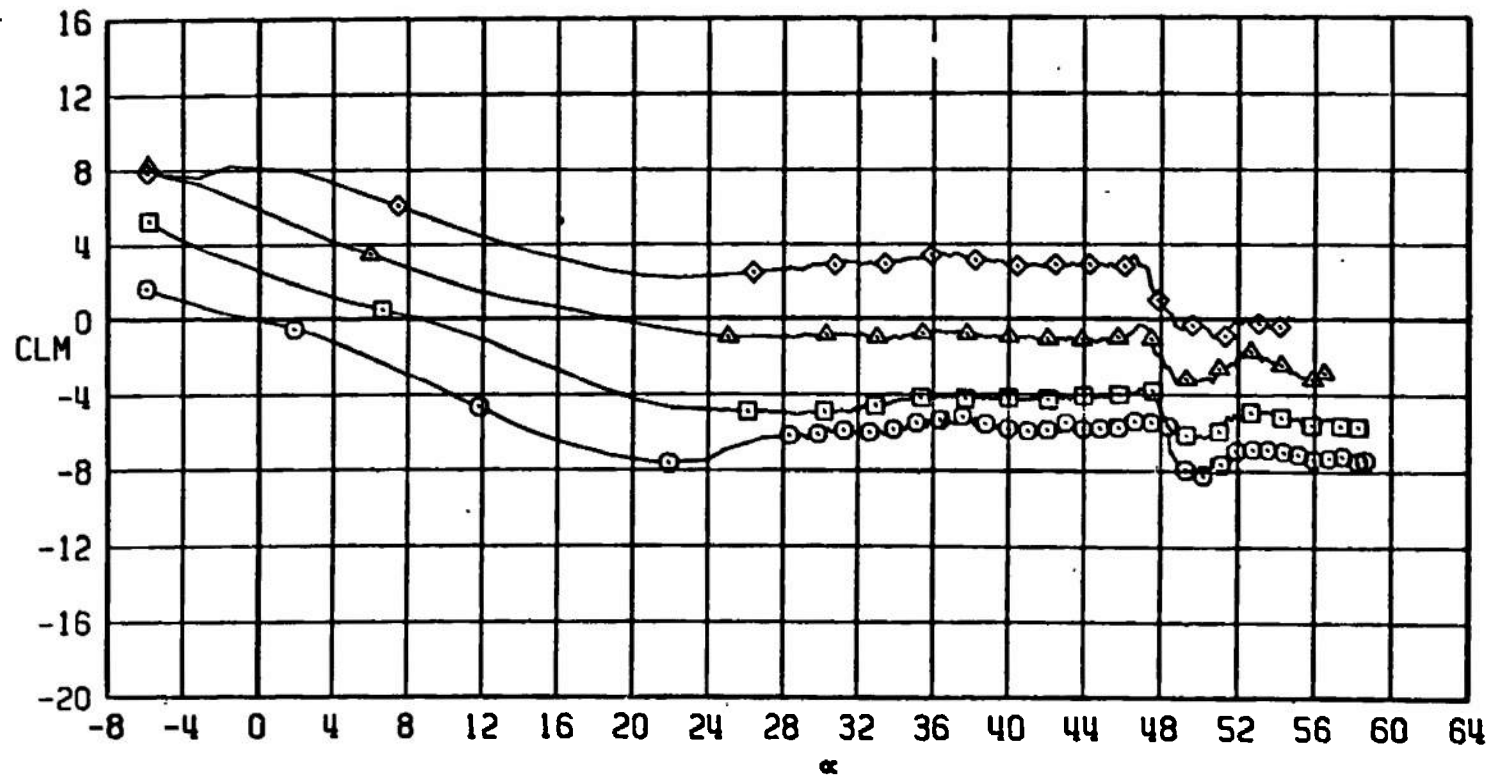


a. C_N versus α

Figure 49. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F15 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.0$.

TEST CENTER NSROC TEST 7

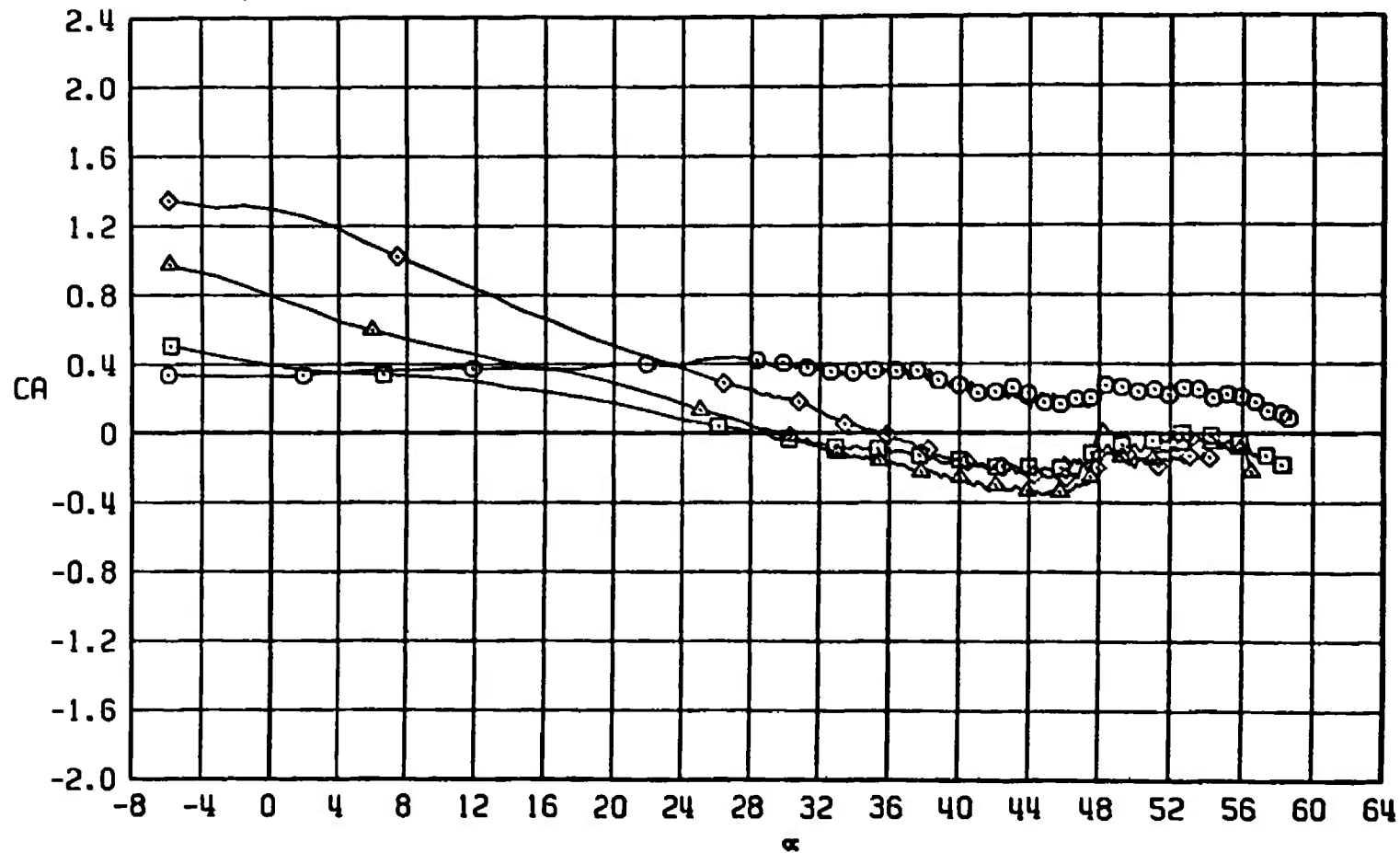
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



b. CLM versus α
Figure 49. Continued.

TEST CENTER NSRDC TEST 7

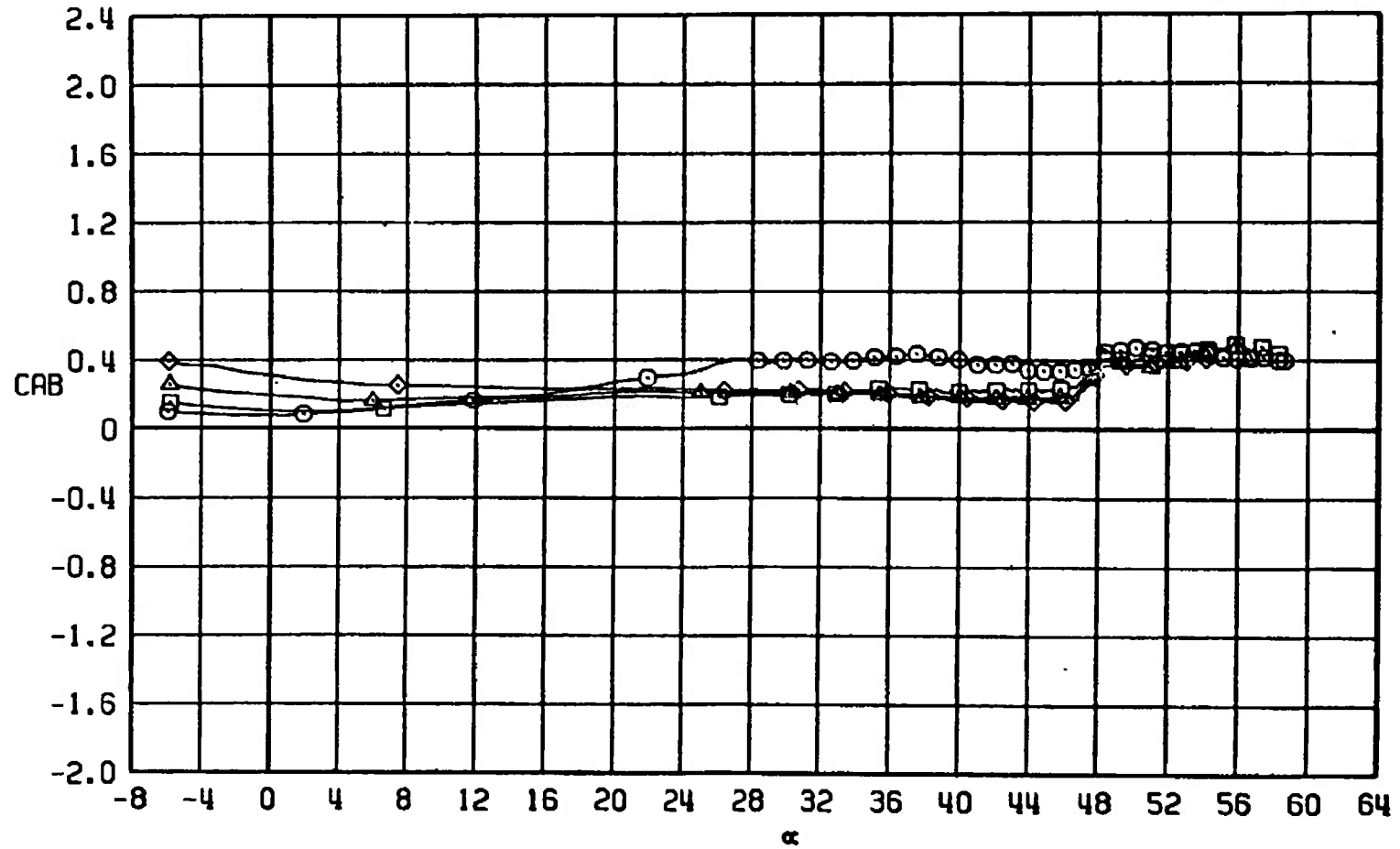
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF15	0	0	0	0	0	0
□	81WOF15	0	0	-10	0	-10	0
△	81WOF15	0	0	-20	0	-20	0
◇	81WOF15	0	0	-30	0	-30	0



c. CA versus α
Figure 49. Continued.

TEST CENTER NSRDC TEST 7

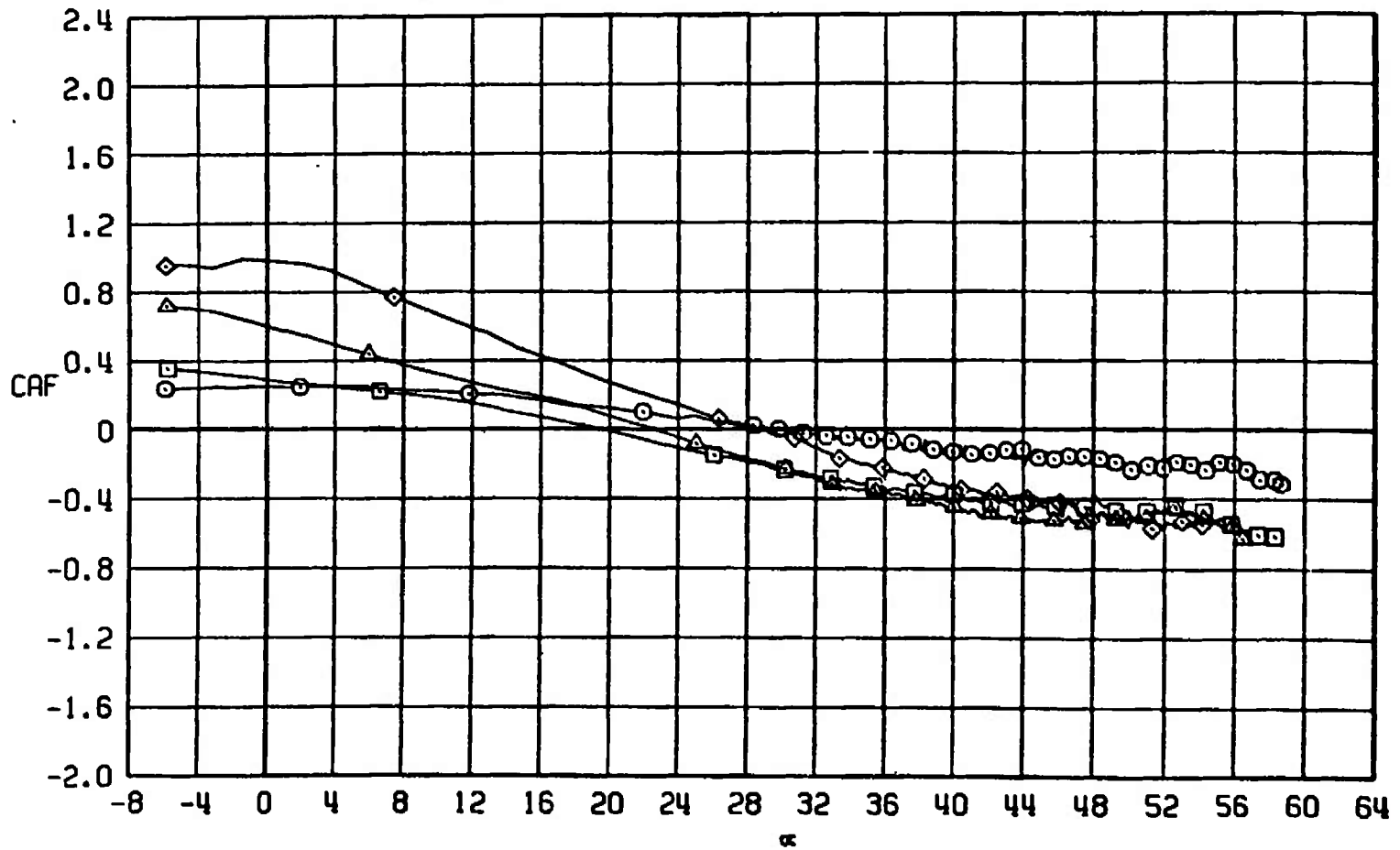
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



d. CAB versus α
Figure 49. Continued.

TEST CENTER NSRDC TEST 7

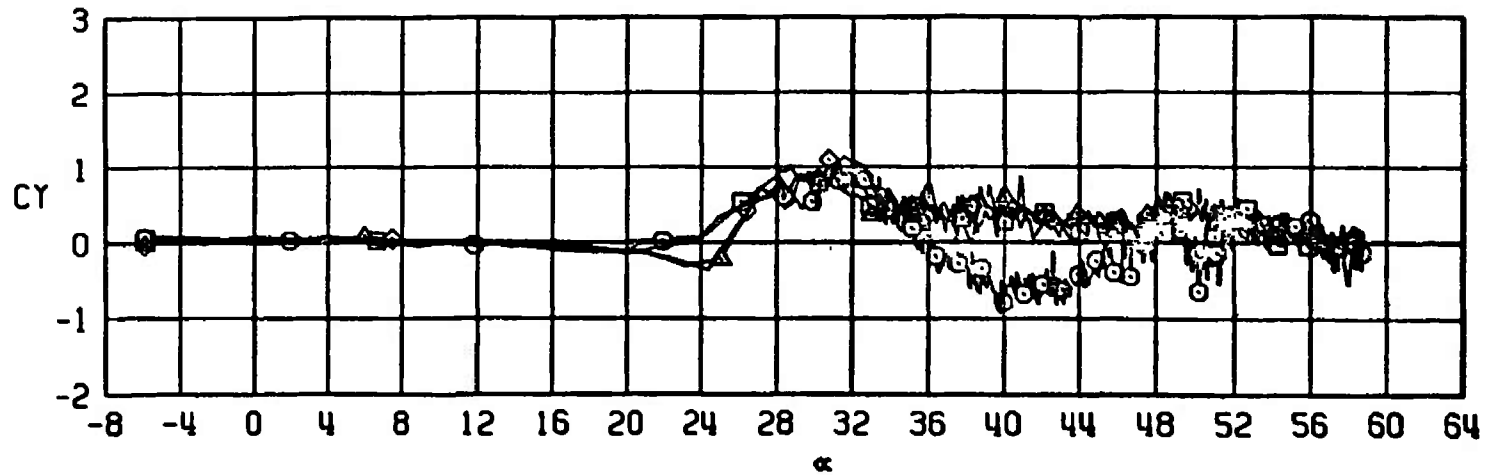
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



e. CAF versus α
Figure 49. Continued.

TEST CENTER NSRDC TEST 7

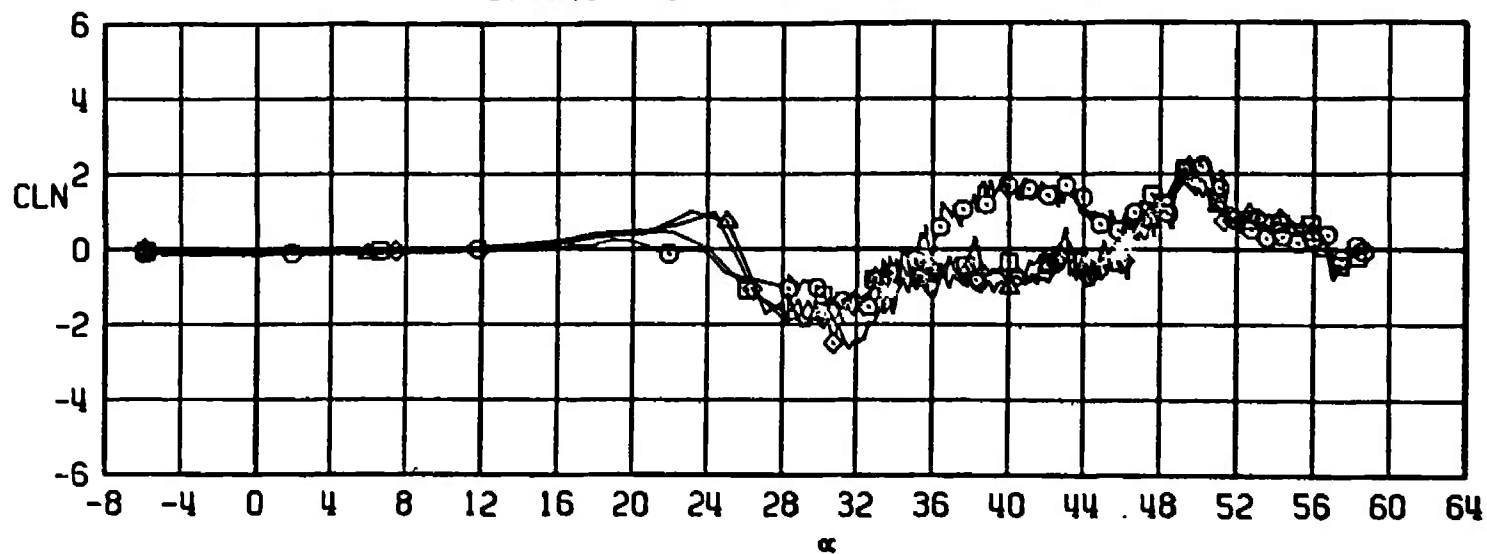
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



f. CY versus α
Figure 49. Continued.

TEST CENTER NSRDC TEST 7

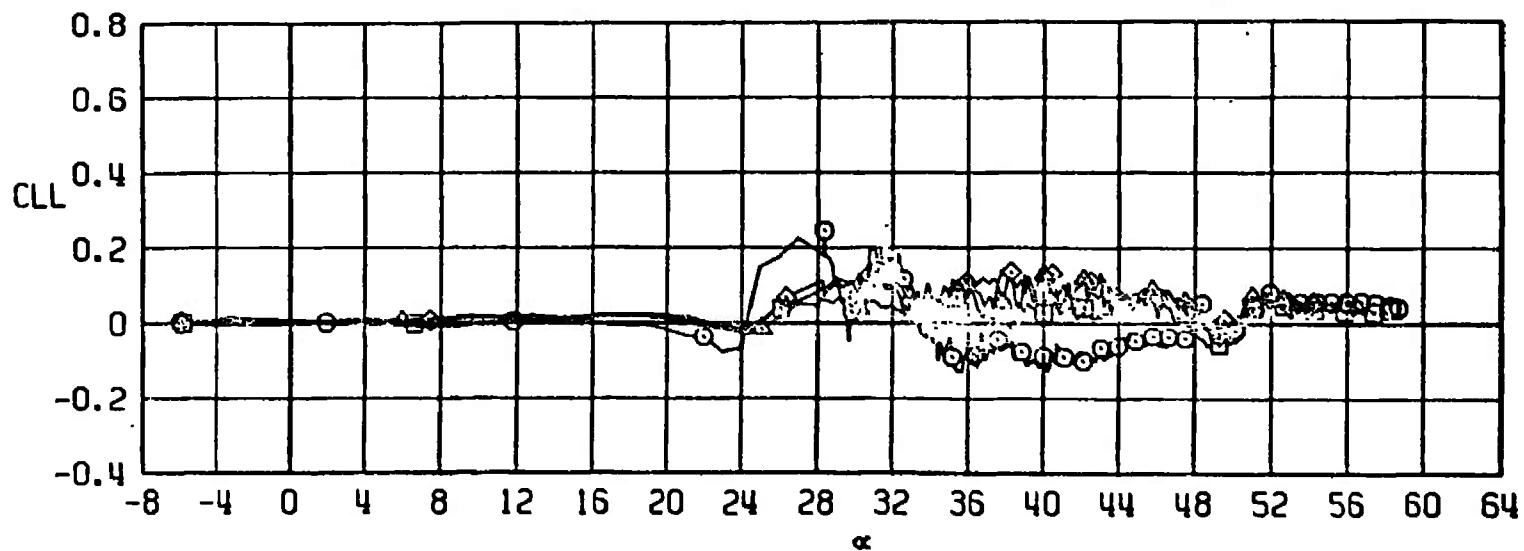
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF15	0	0	0	0	0	0
⊠	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



g. CLN versus α
Figure 49. Continued.

TEST CENTER NSRDC TEST 7

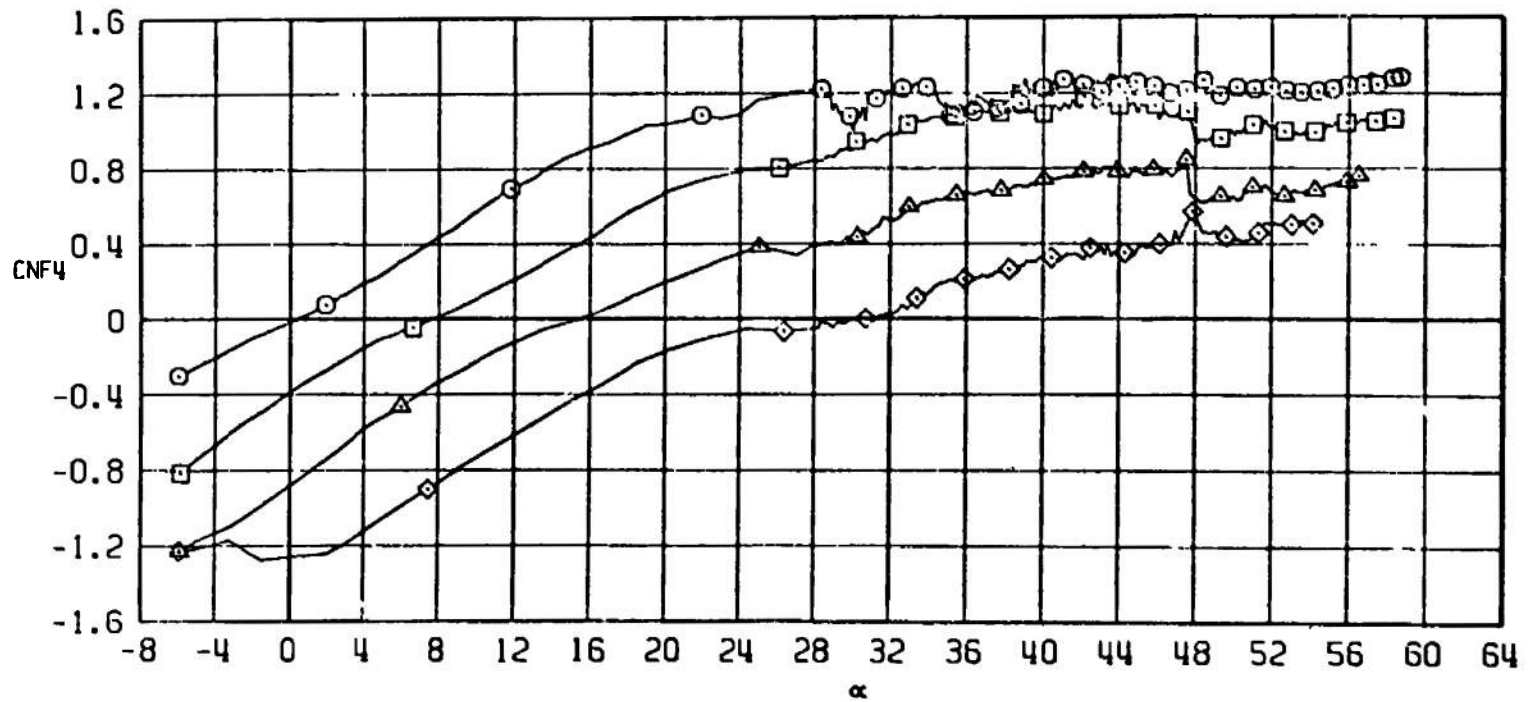
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	B1WOF15	0	0	0	0	0	0
□	B1WOF15	0	0	-10	0	-10	0
△	B1WOF15	0	0	-20	0	-20	0
◇	B1WOF15	0	0	-30	0	-30	0



h. CLL versus α
Figure 49. Continued.

TEST CENTER NSROC TEST 7

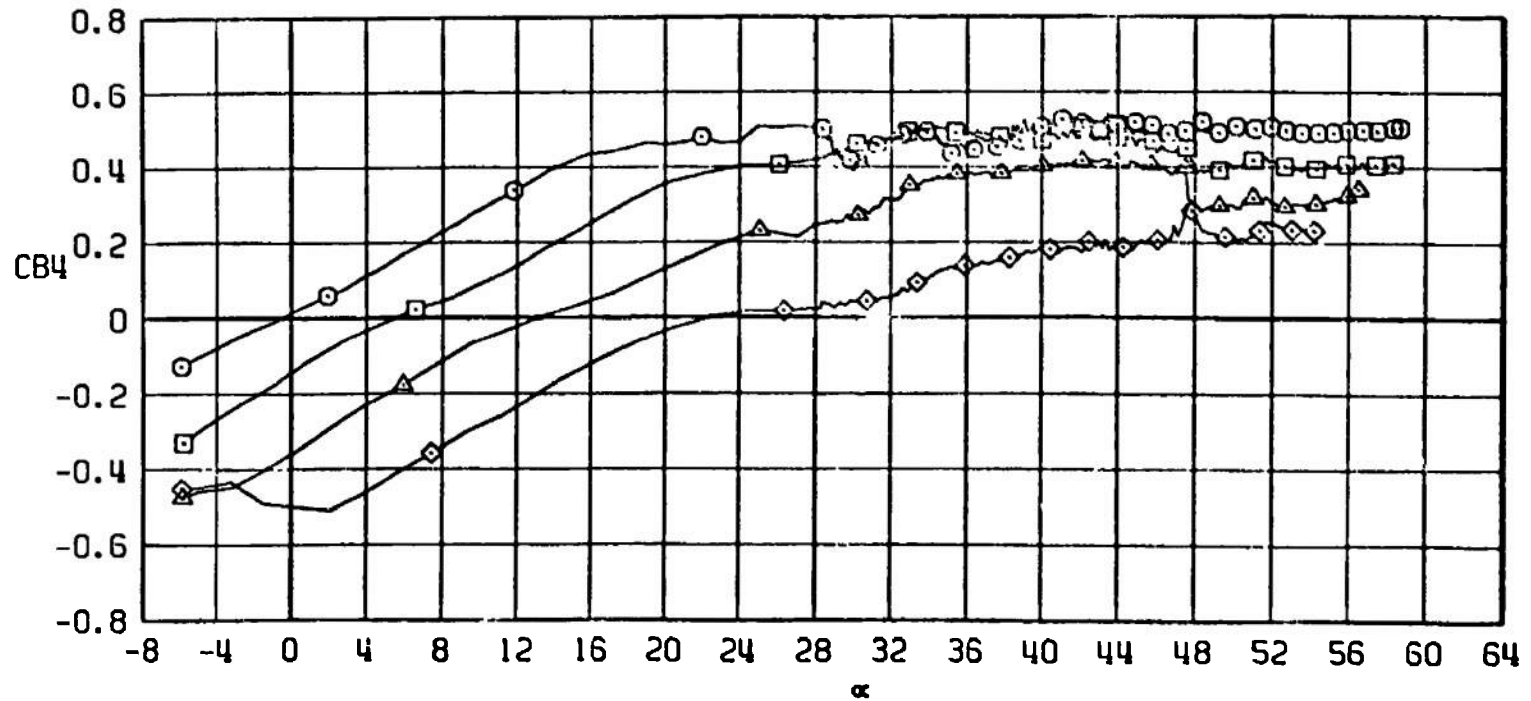
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 49. Continued.

TEST CENTER NSRDC TEST 7

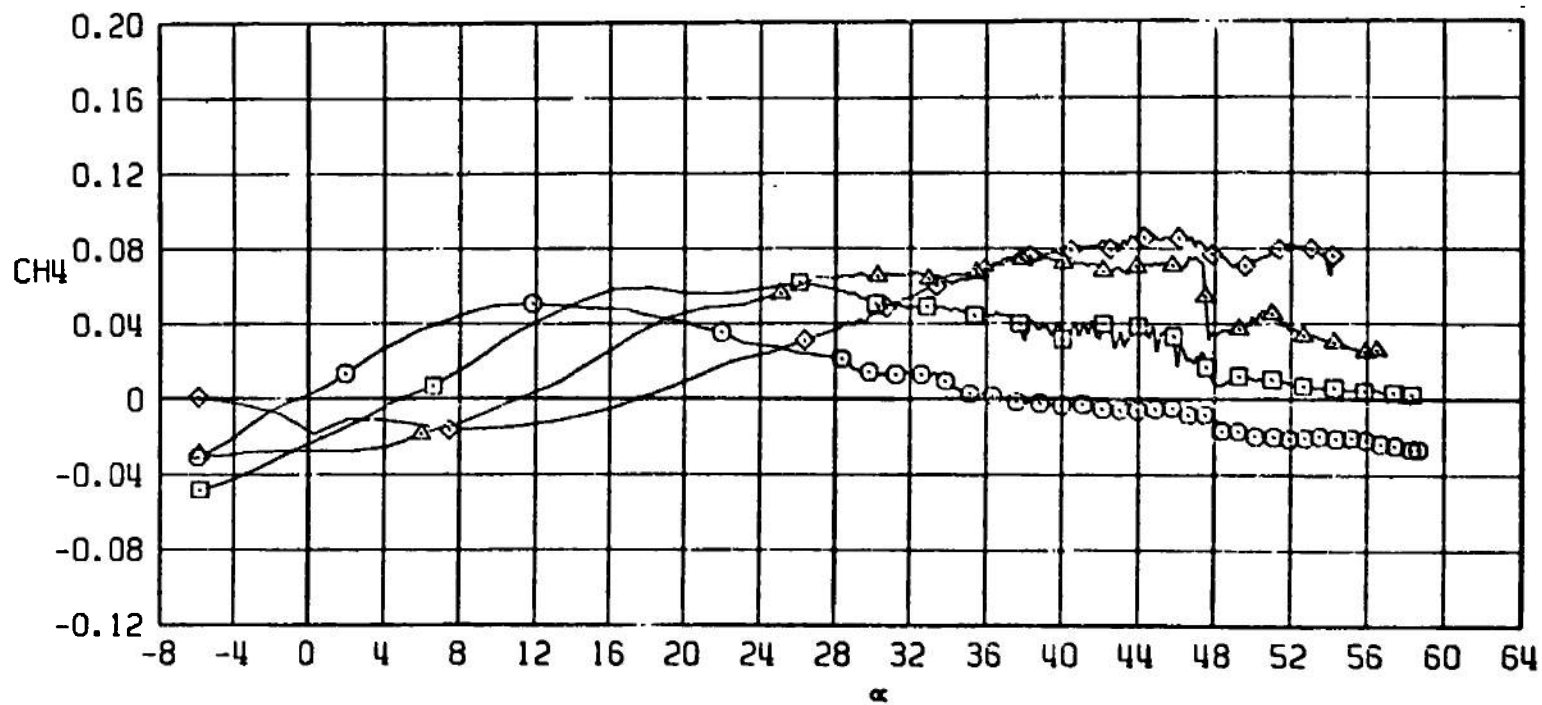
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



j. CB4 versus α
Figure 49. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 49. Concluded.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF15	0	0	0	0	0	0
□	B1WOF15	0	0	-10	0	-10	0
△	B1WOF15	0	0	-20	0	-20	0
◇	B1WOF15	0	0	-30	0	-30	0

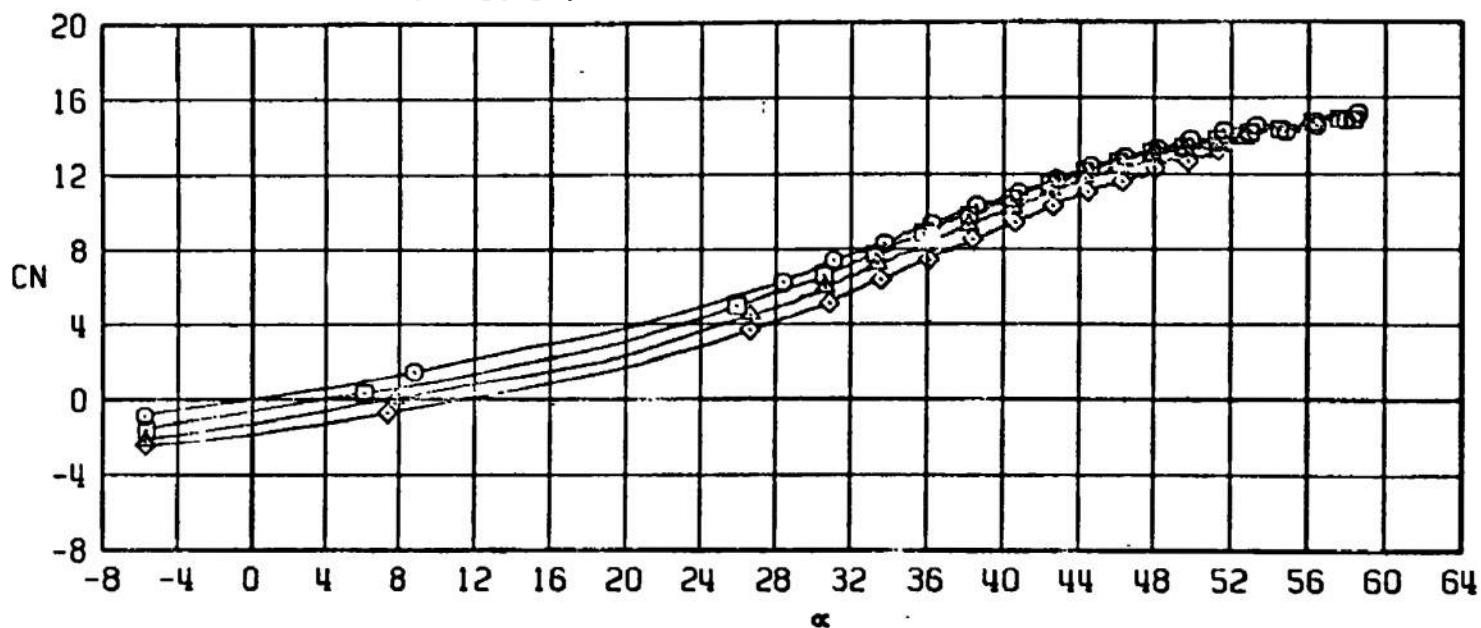
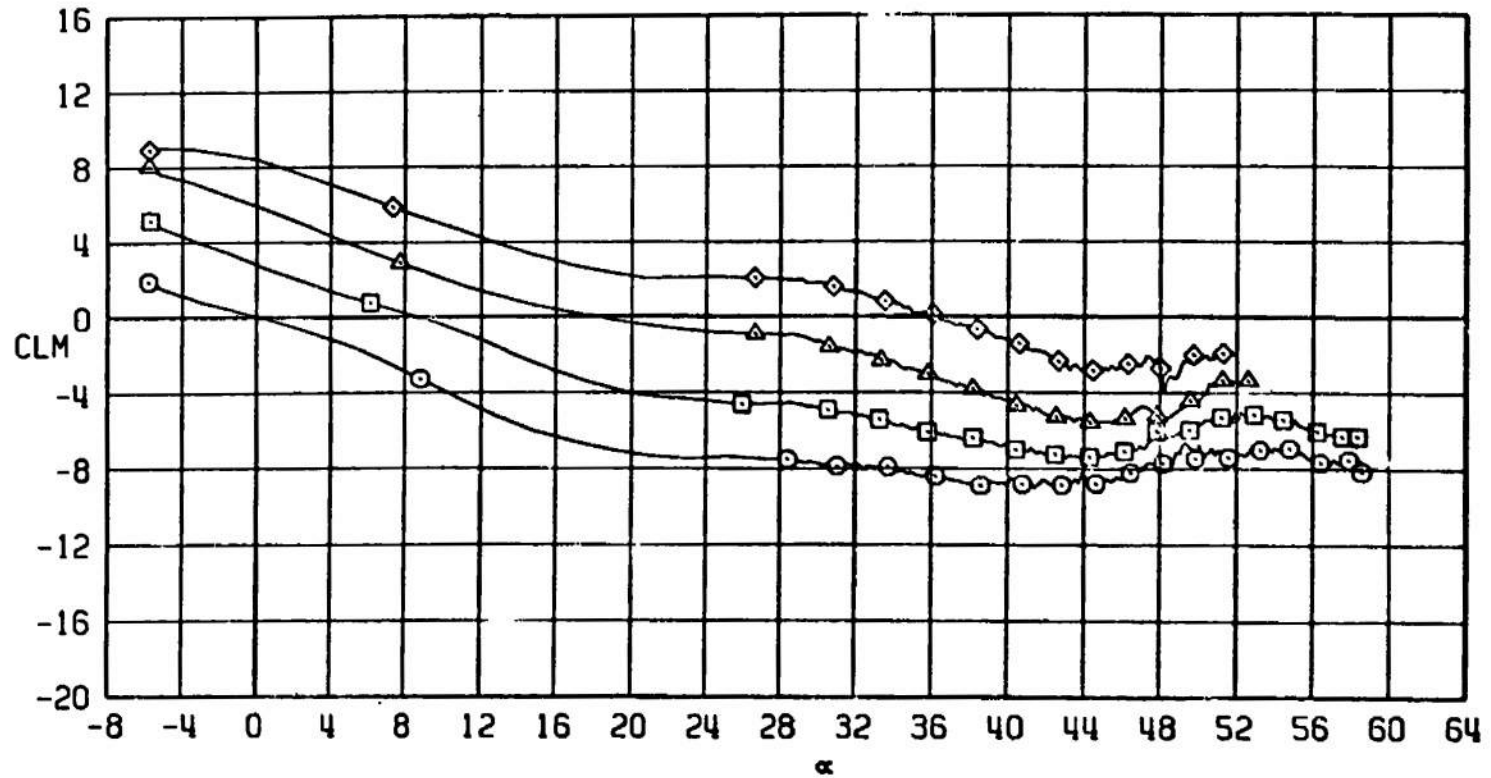
a. C_N versus α

Figure 50. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F15 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.1$.

TEST CENTER NSROC TEST 7

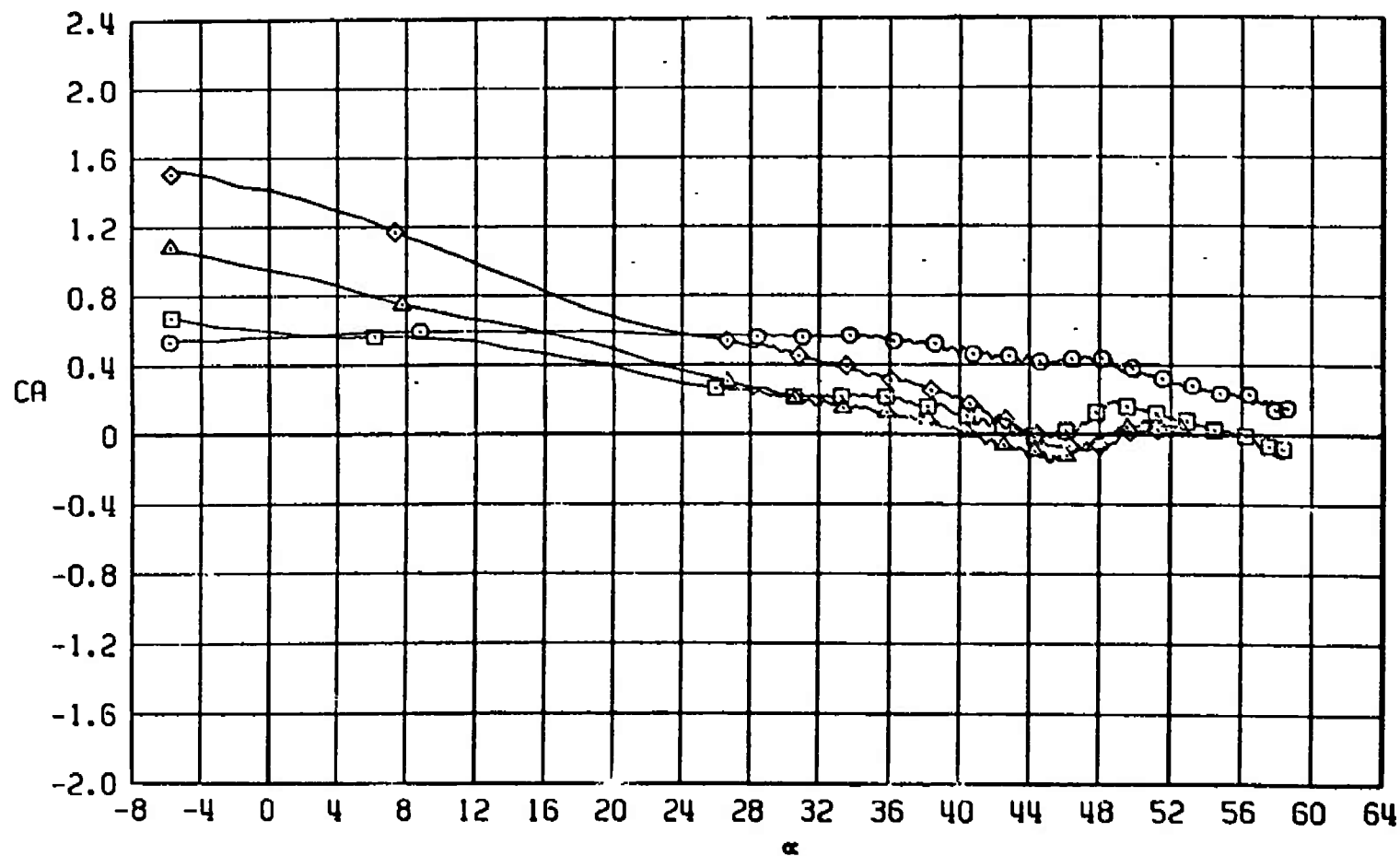
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



b. CLM versus α
Figure 50. Continued.

TEST CENTER NSRDC TEST 7

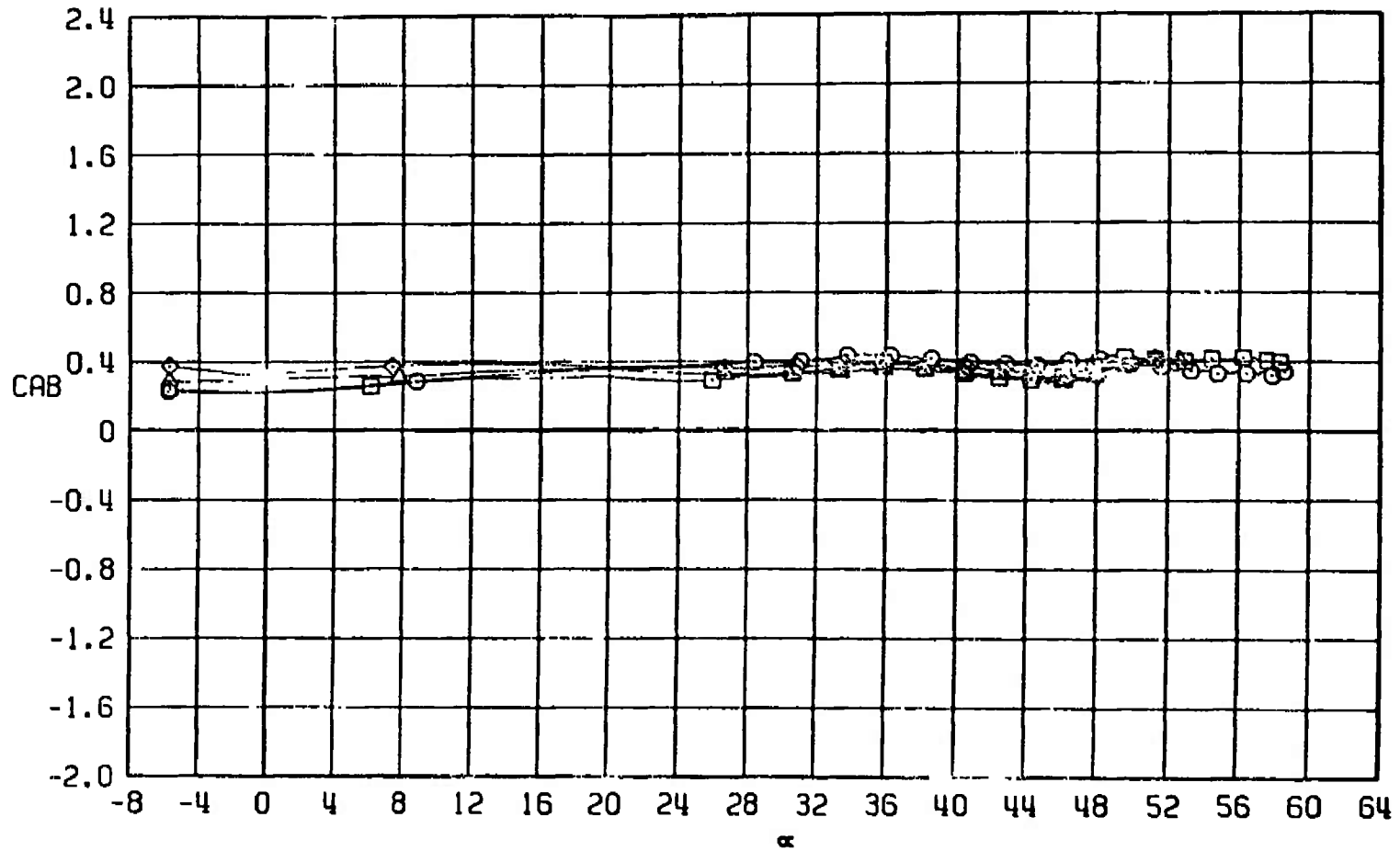
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



c. CA versus α
Figure 50. Continued.

TEST CENTER NSRDC TEST 7

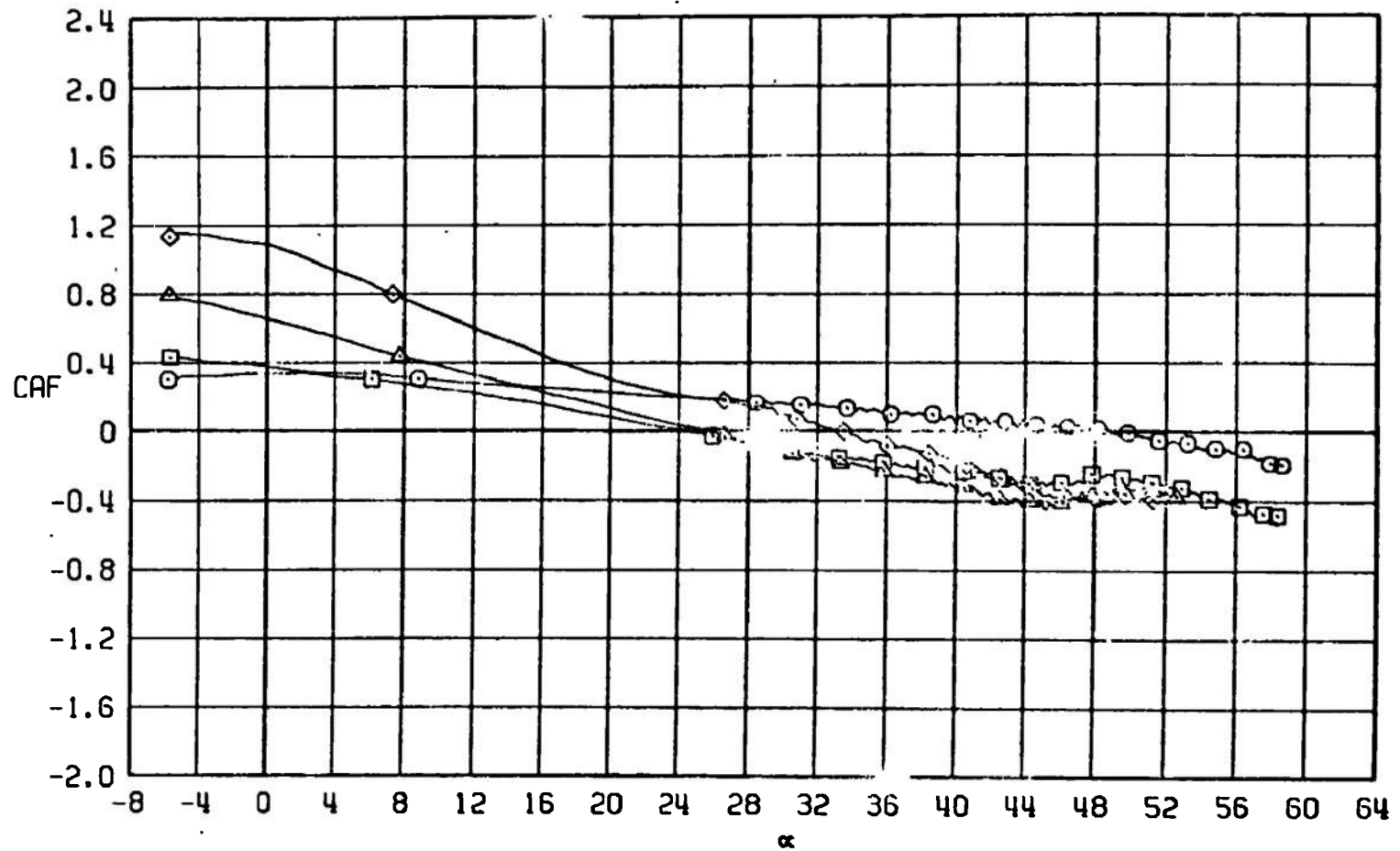
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



d. CAB versus α
Figure 50. Continued.

TEST CENTER NSROC TEST 7

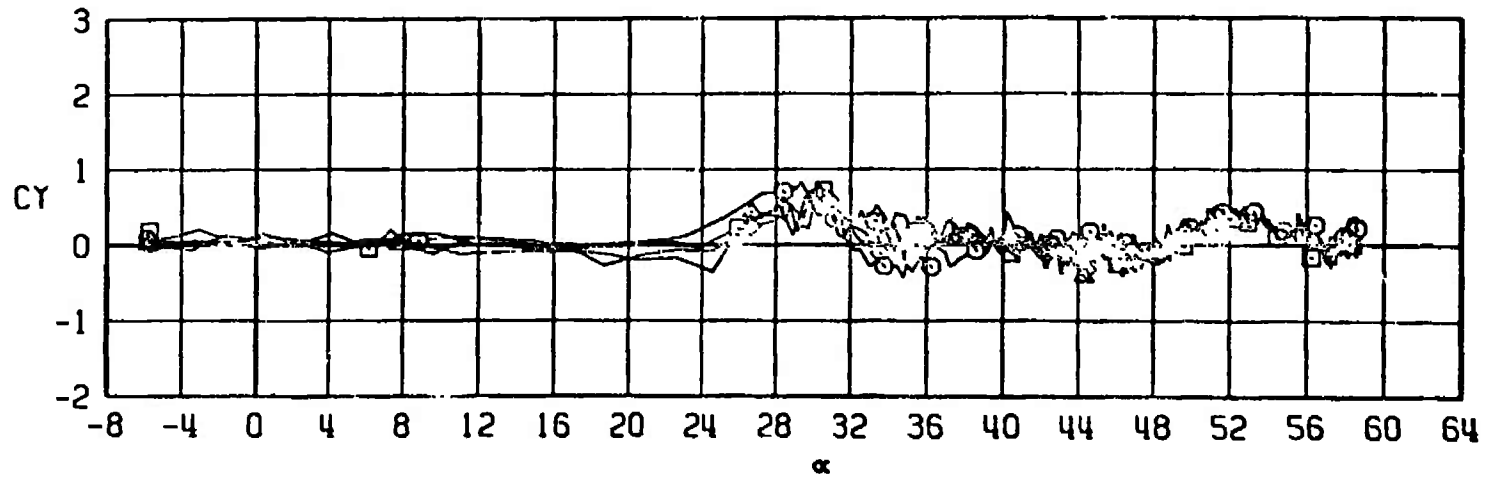
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



e. CAF versus α
Figure 50. Continued.

TEST CENTER NSROC TEST 7

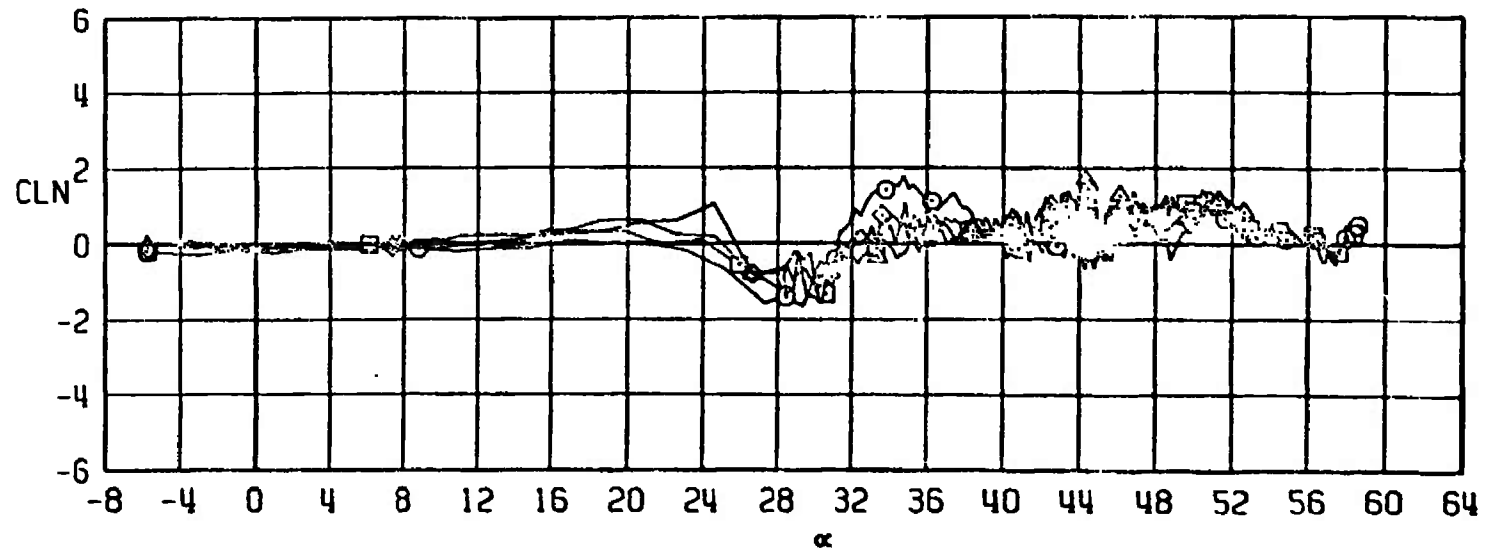
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



f. CY versus α
Figure 50. Continued.

TEST CENTER NSRDC TEST 7

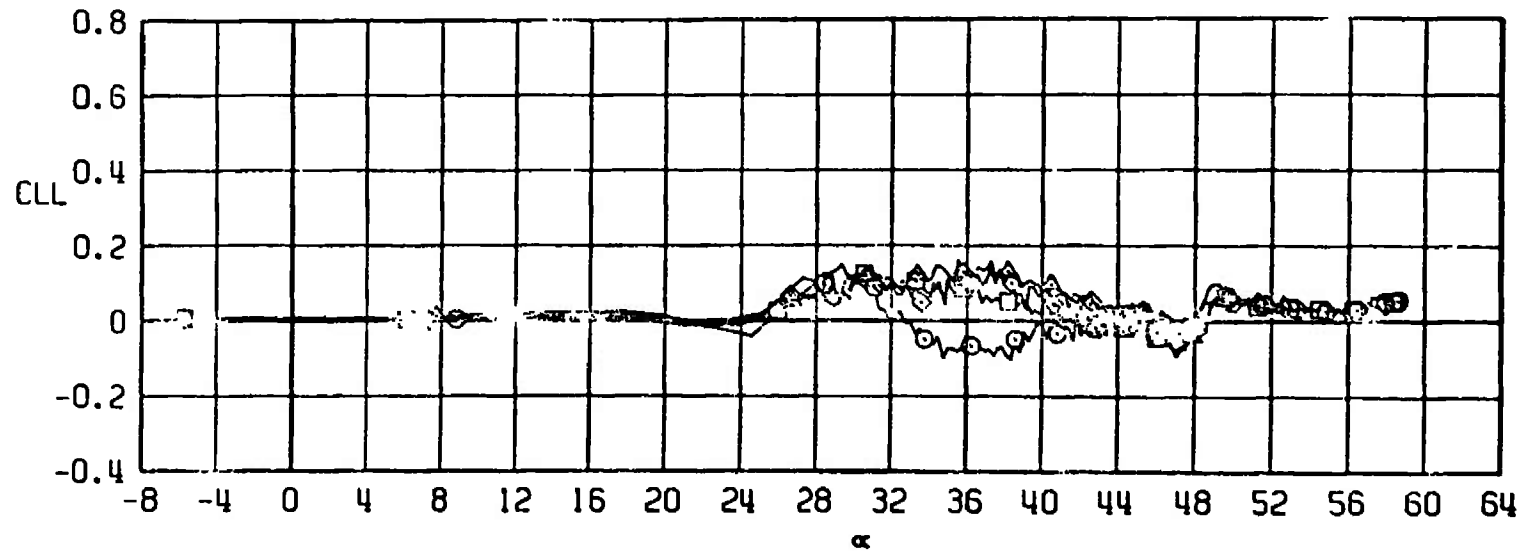
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



g. CLN versus α
Figure 50. Continued.

TEST CENTER NSRDC TEST 7

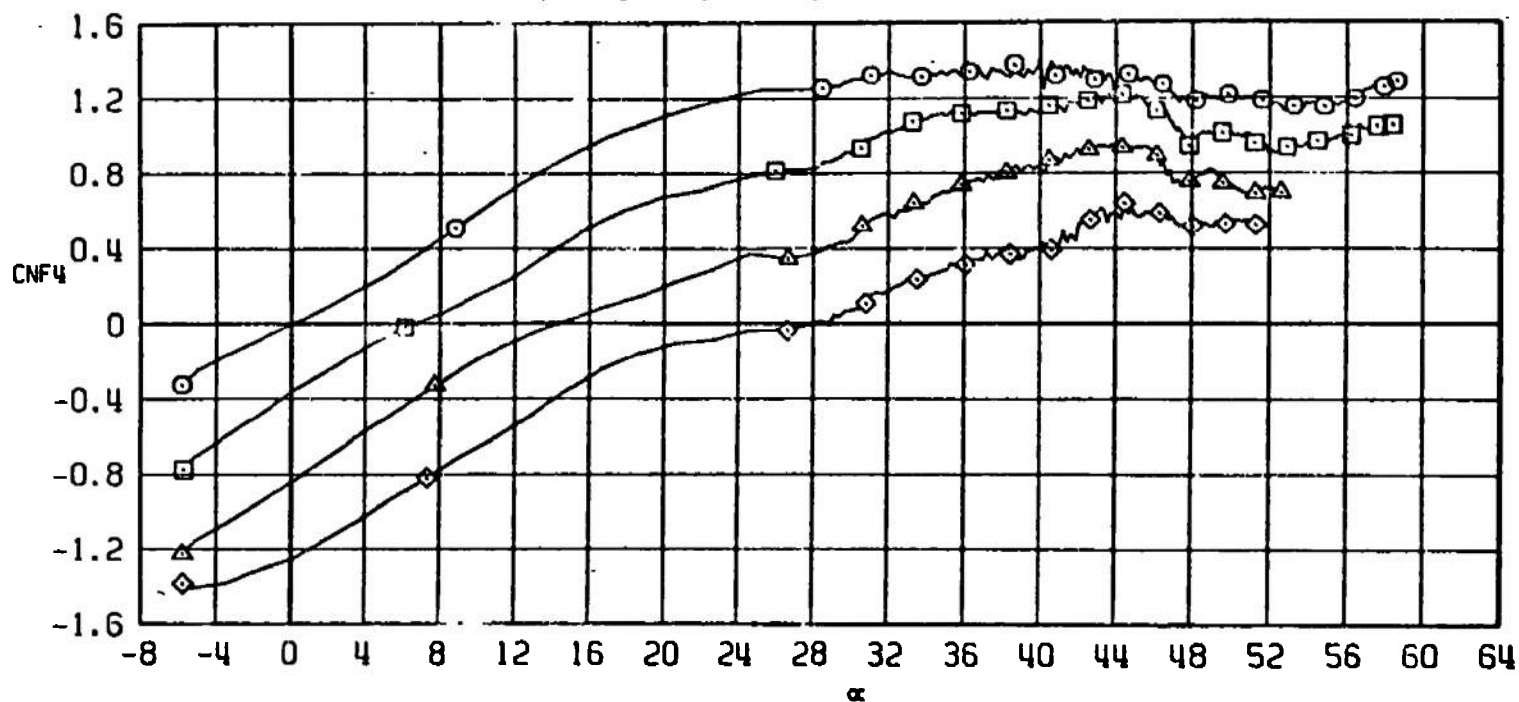
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF15	0	0	0	0	0	0
⊠	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



h. CLL versus α
Figure 50. Continued.

TEST CENTER NSRDC TEST 7

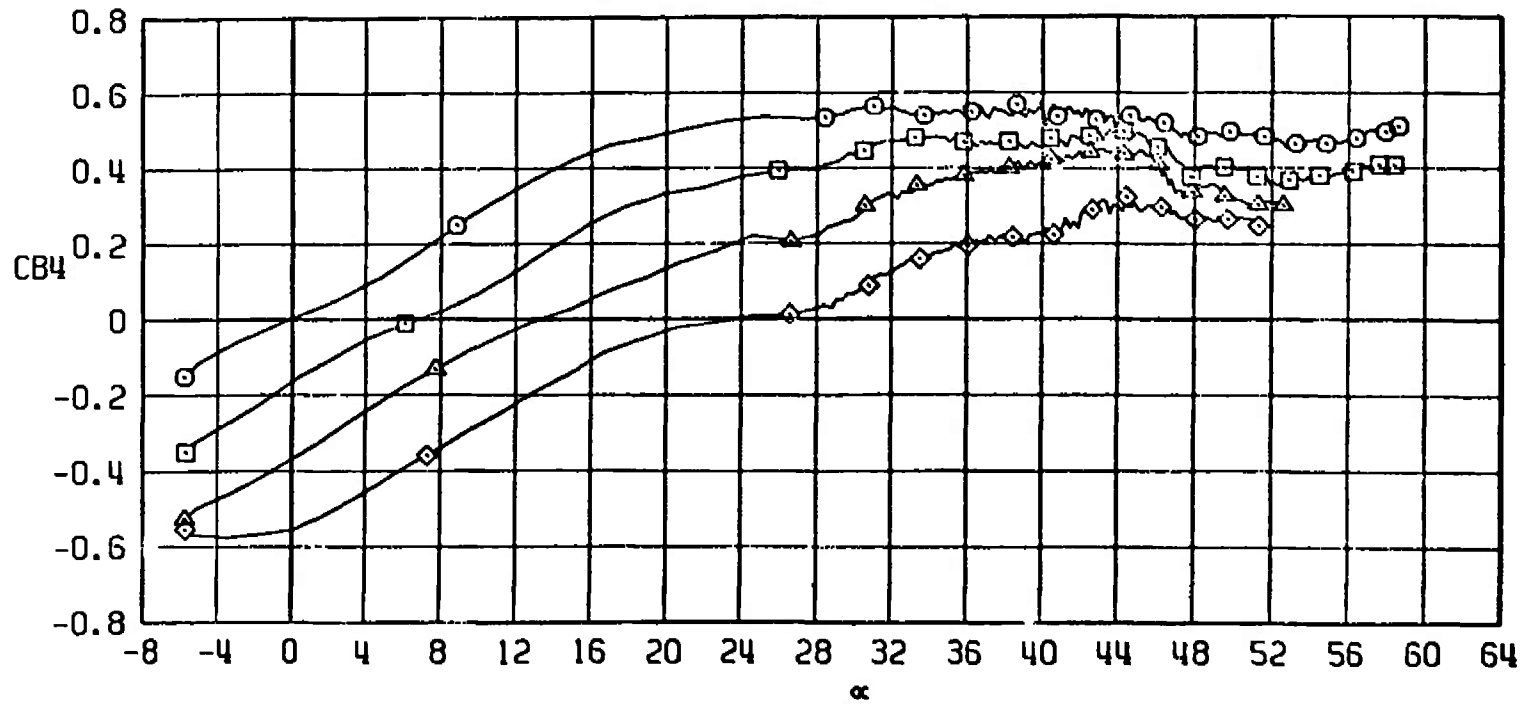
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 50. Continued.

TEST CENTER NSRDC TEST 7

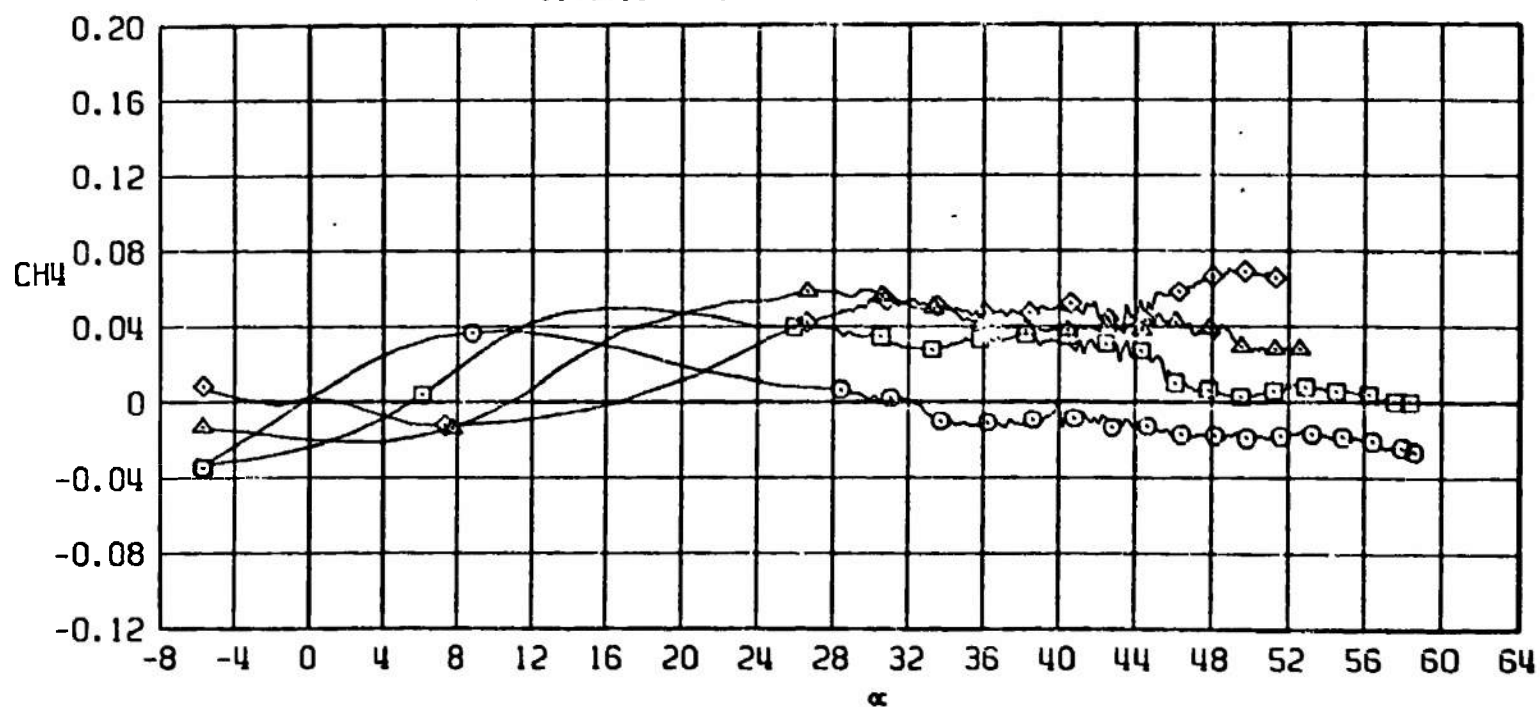
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



j. CB4 versus α
Figure 50. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF15	0	0	0	0	0	0
□	BIWOF15	0	0	-10	0	-10	0
△	BIWOF15	0	0	-20	0	-20	0
◇	BIWOF15	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 50. Concluded.

TEST CENTER NSROC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F23	0	0	0	0	0	0
□	B1W0F23	0	0	-10	0	-10	0
△	B1W0F23	0	0	-20	0	-20	0
◇	B1W0F23	0	0	-30	0	-30	0

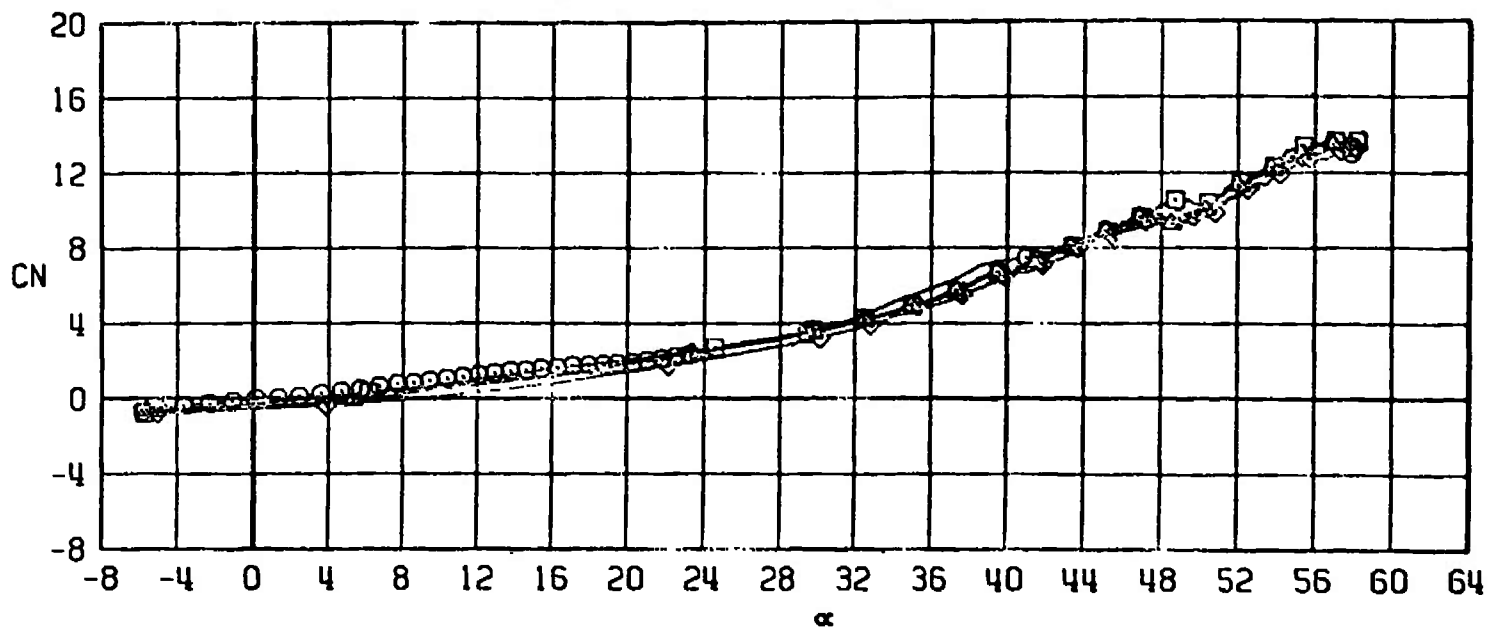
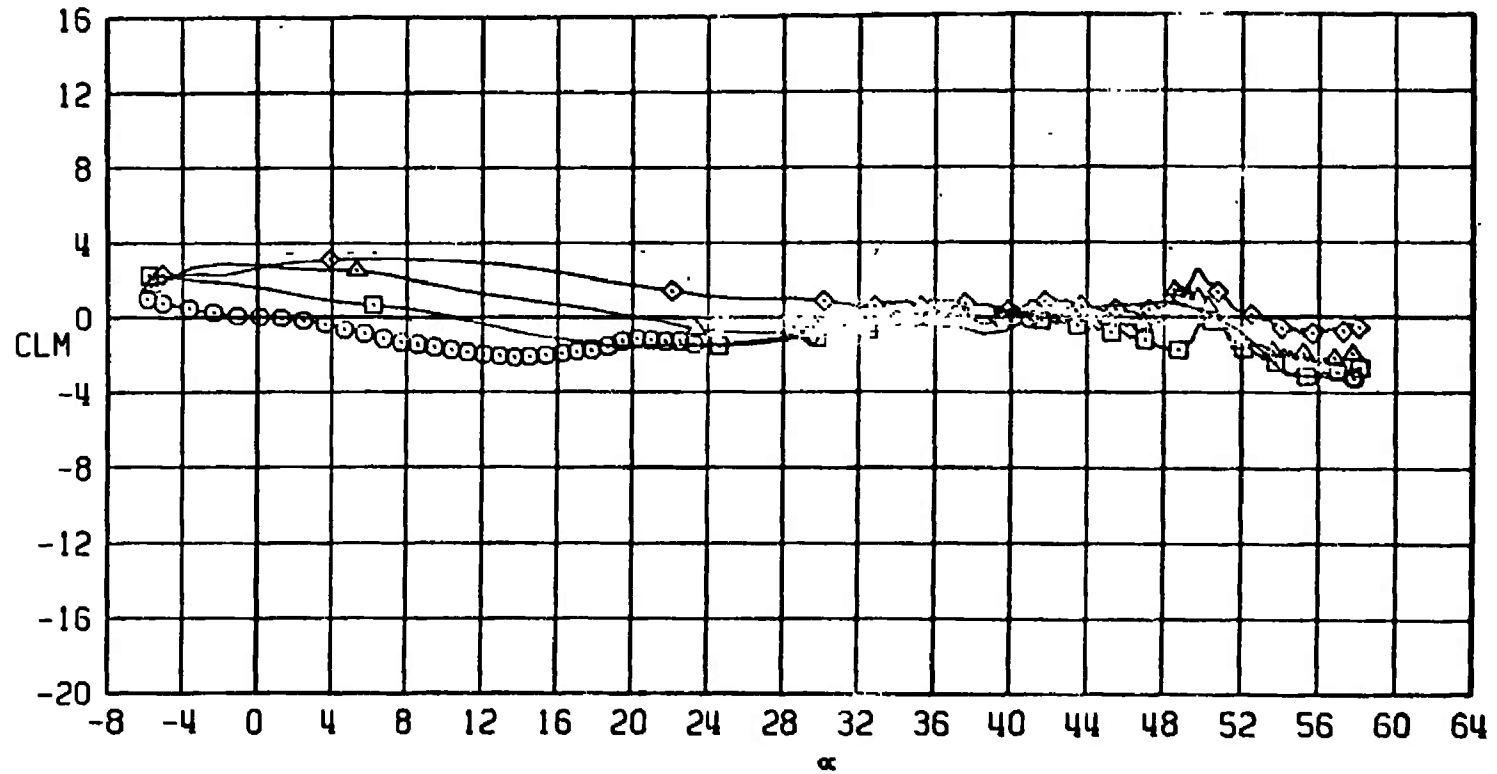
a. C_N versus α

Figure 51. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F23 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.8$.

TEST CENTER NSRDC TEST 7

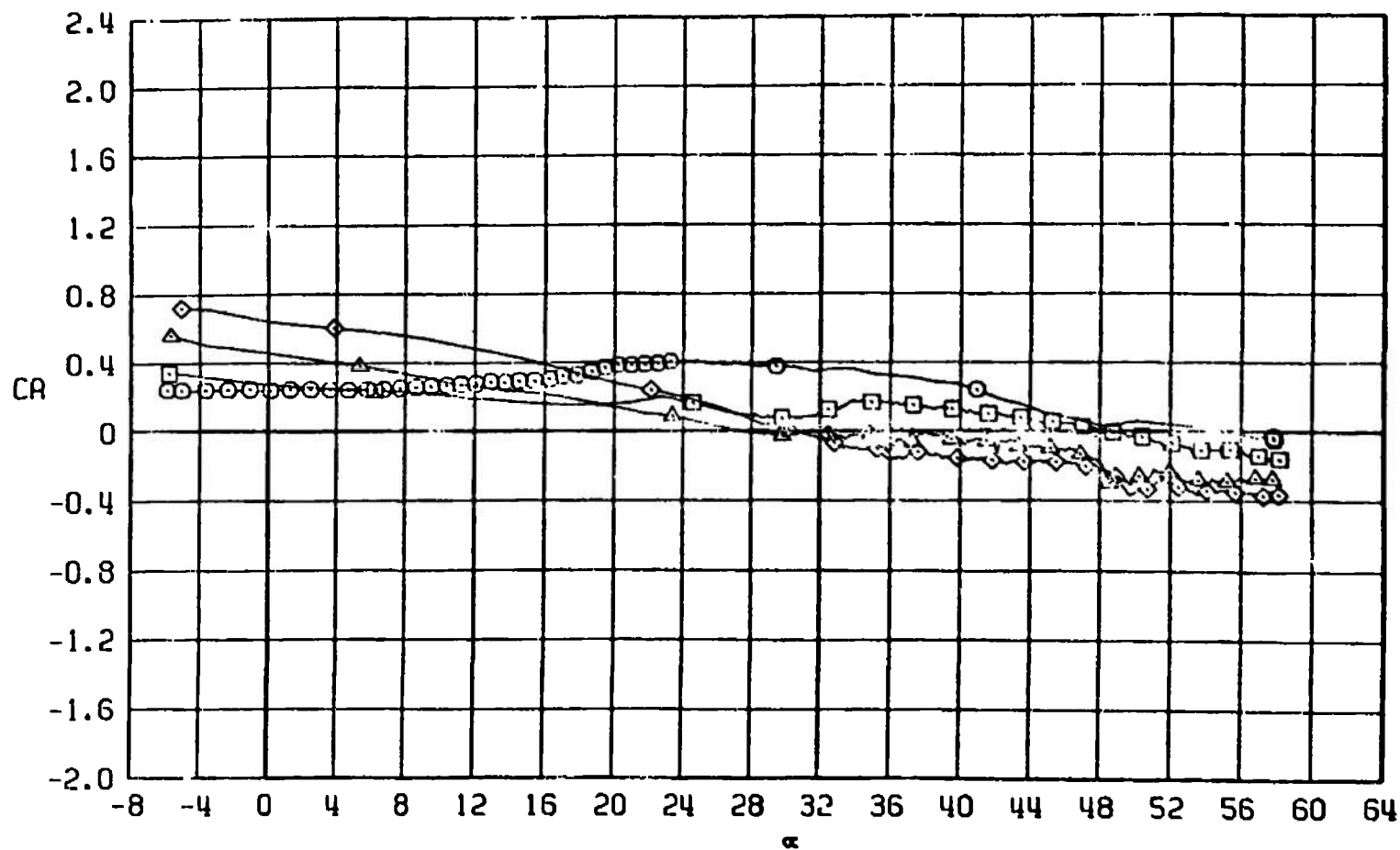
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



b. CLM versus α
Figure 51. Continued.

TEST CENTER NSRDC TEST 7

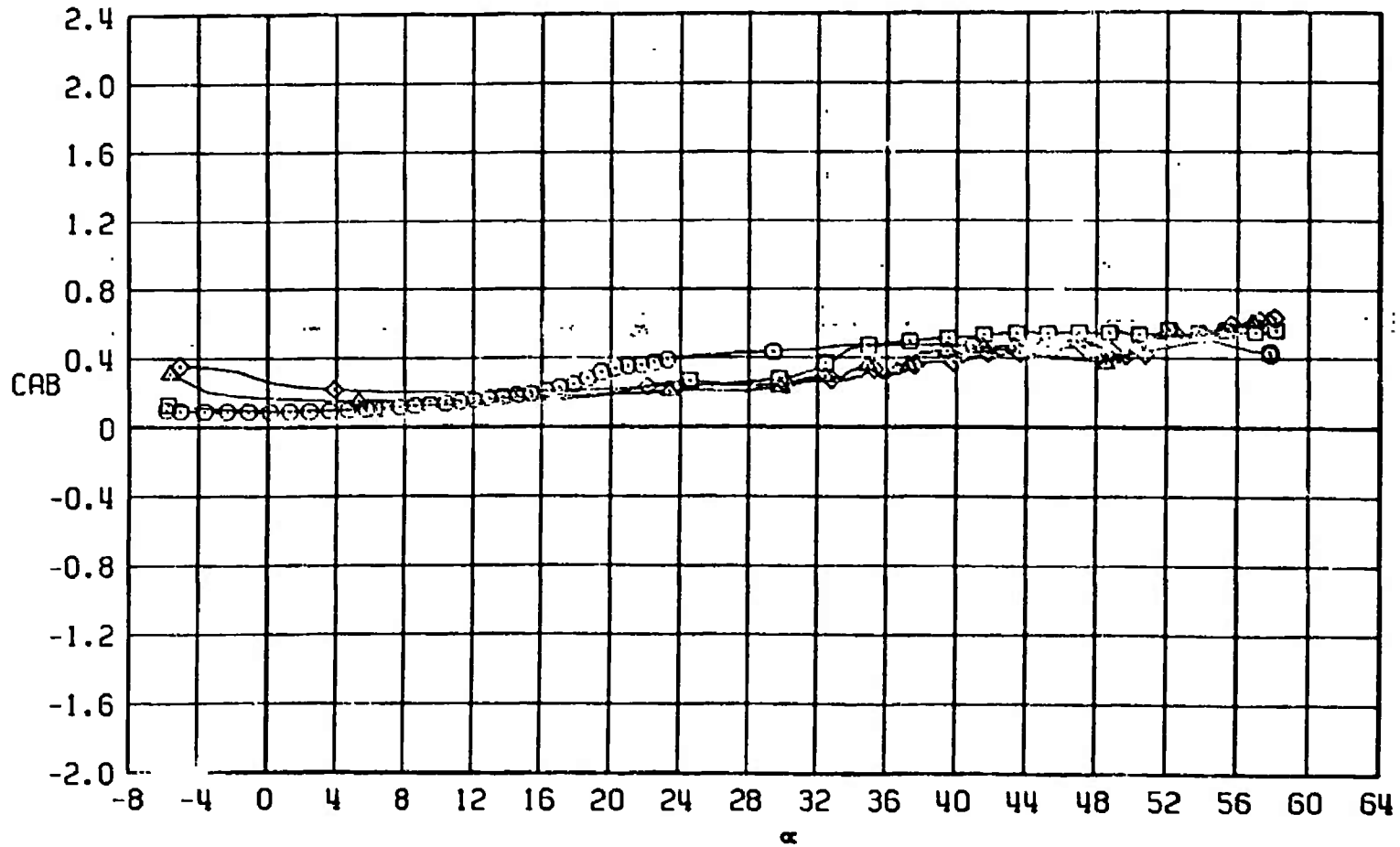
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF23	0	0	0	0	0	0
□	B1WOF23	0	0	-10	0	-10	0
△	B1WOF23	0	0	-20	0	-20	0
◇	B1WOF23	0	0	-30	0	-30	0



c. CA versus α
Figure 51. Continued.

TEST CENTER NSRDC TEST 7

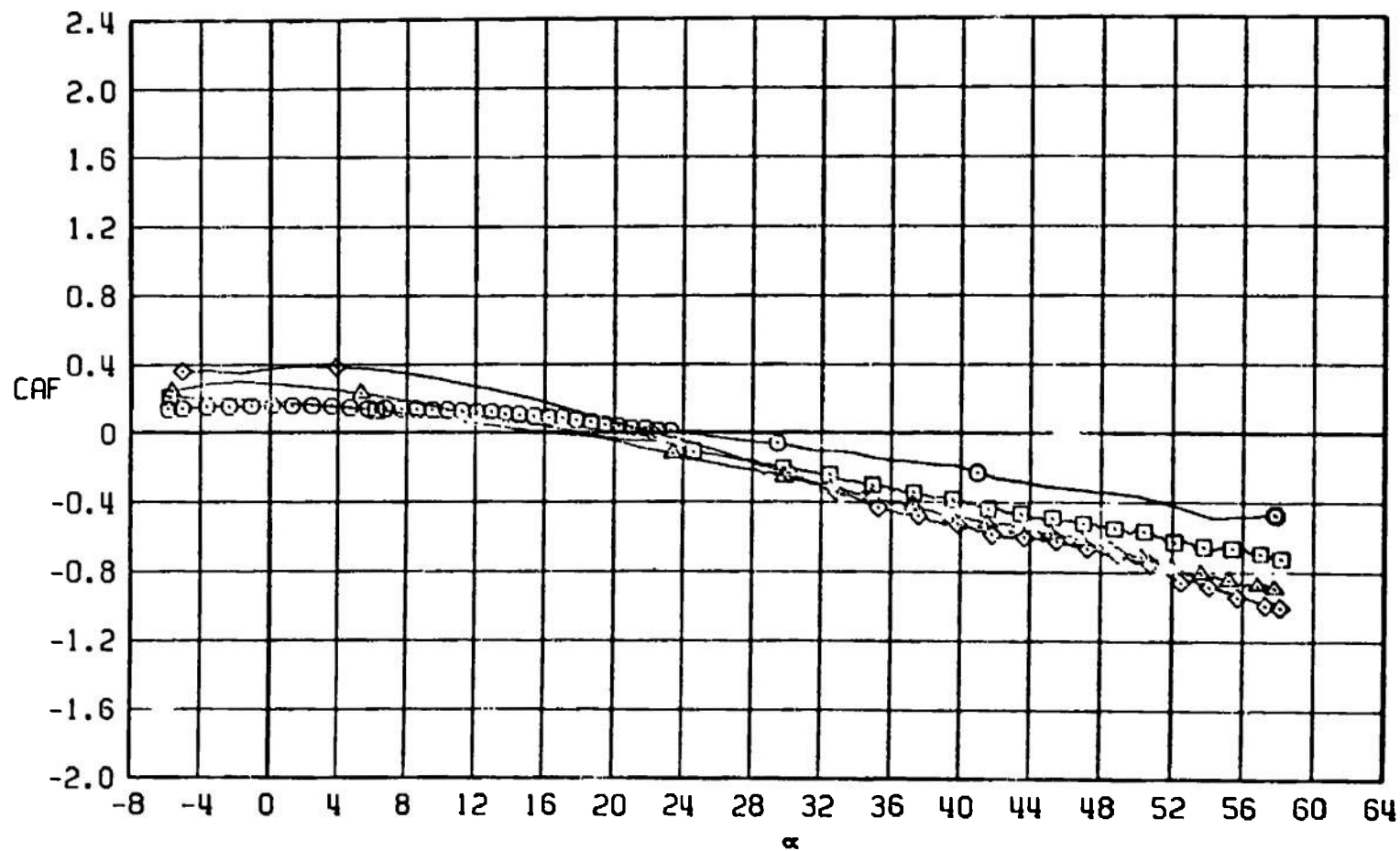
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



d. CAB versus α
Figure 51. Continued.

TEST CENTER NSROC TEST 7

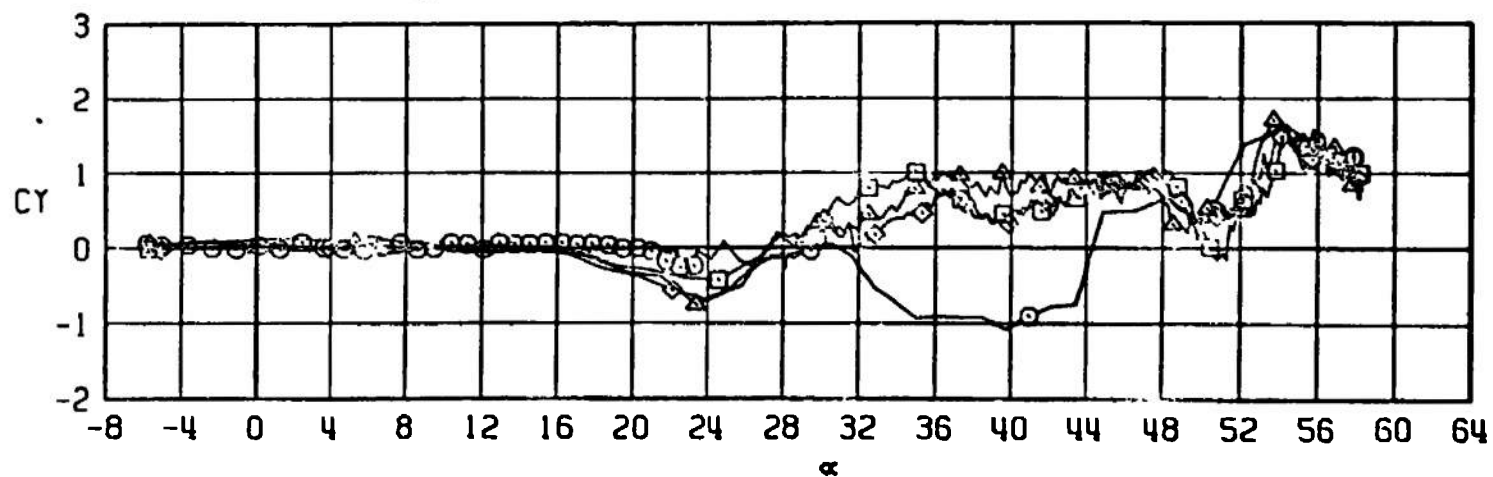
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF23	0	0	0	0	0	0
□	B1WOF23	0	0	-10	0	-10	0
△	B1WOF23	0	0	-20	0	-20	0
◇	B1WOF23	0	0	-30	0	-30	0



e. CAF versus α
Figure 51. Continued.

TEST CENTER NSRDC TEST 7

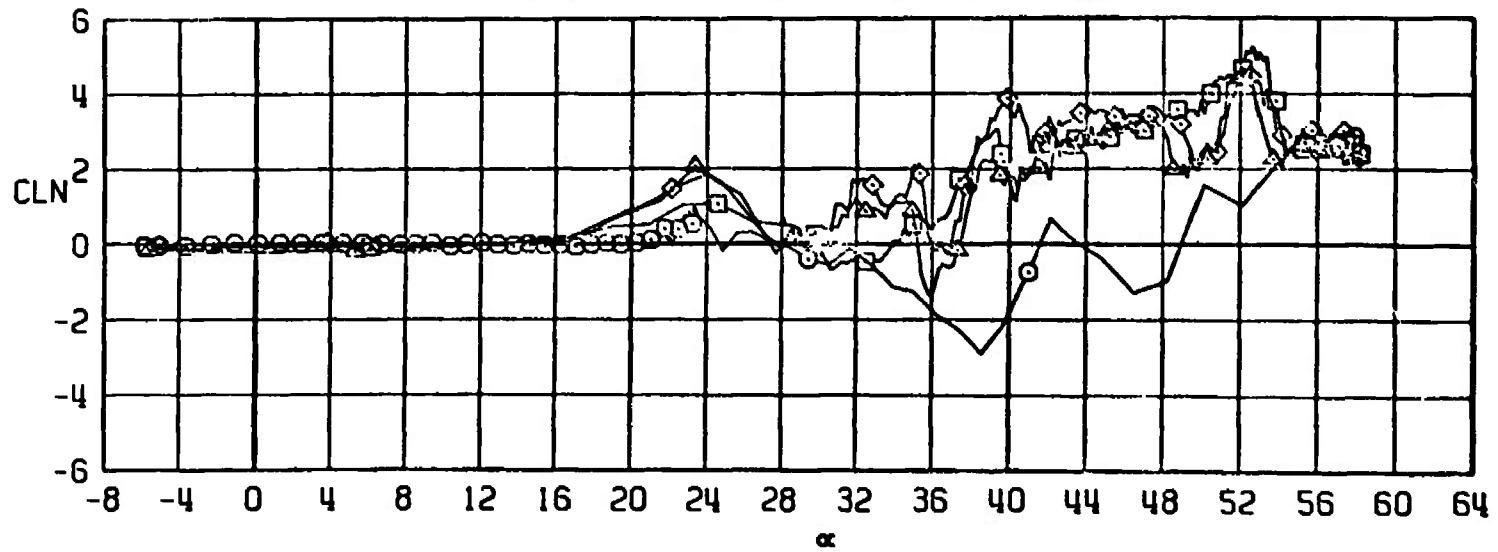
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



f. CY versus α
Figure 51. Continued.

TEST CENTER NSROC TEST 7

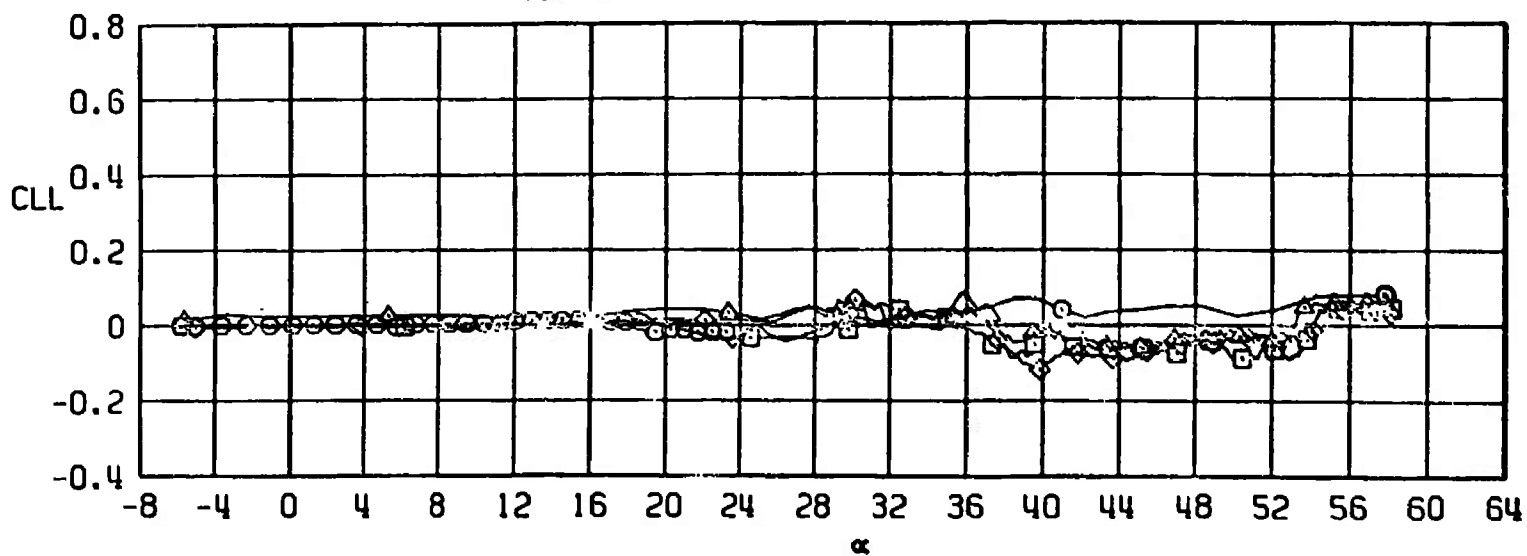
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF23	0	0	0	0	0	0
⊠	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



g. CLN versus α
Figure 51. Continued.

TEST CENTER NSRDC TEST 7

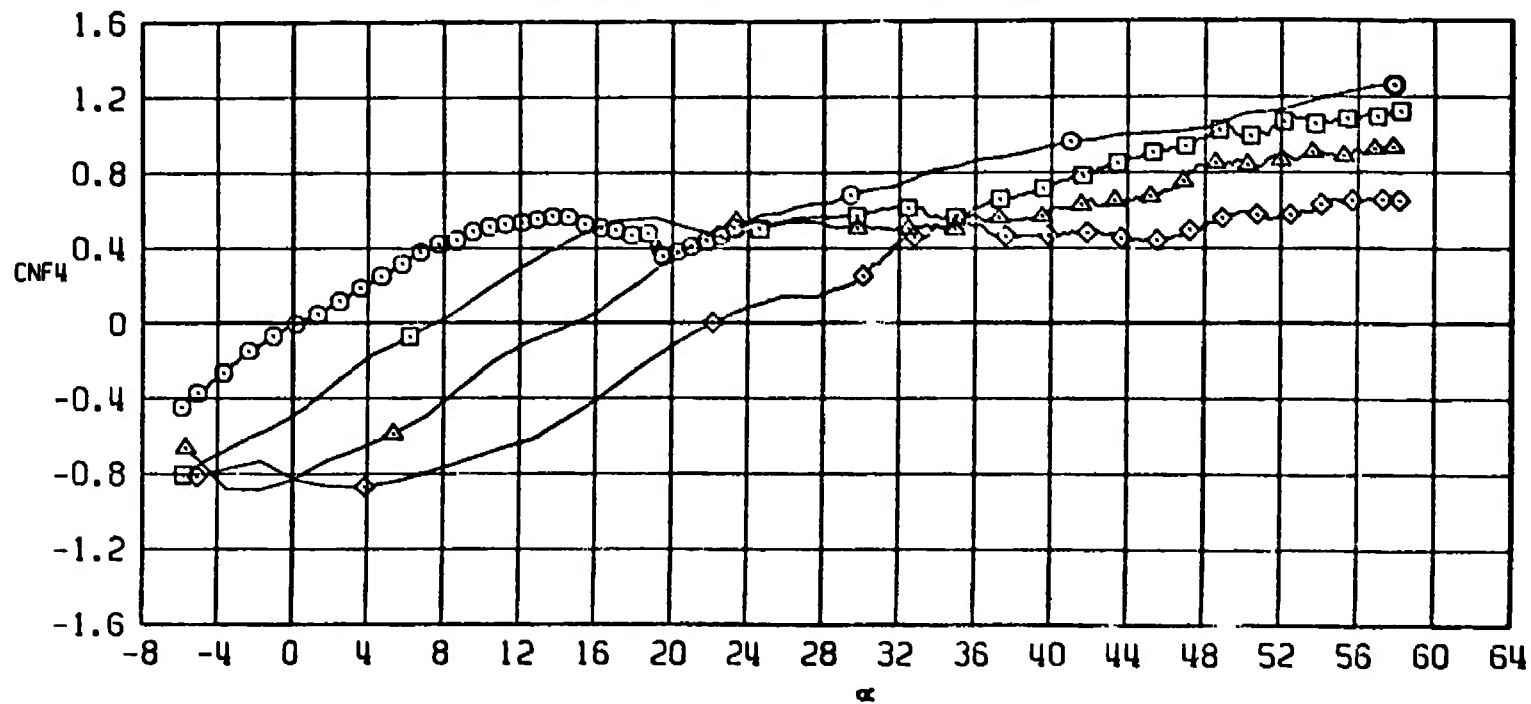
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



h. CLL versus α
Figure 51. Continued.

TEST CENTER NSRDC TEST 7

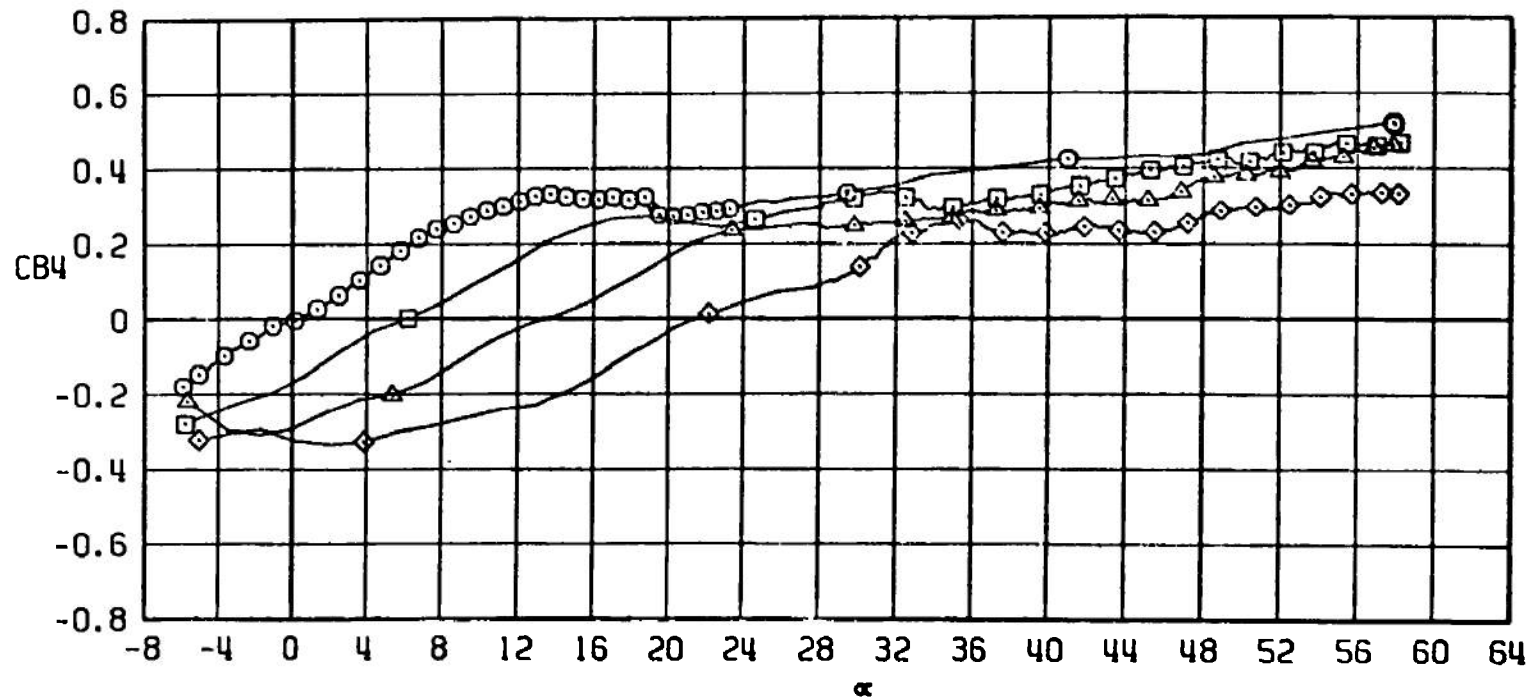
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF23	0	0	0	0	0	0
□	81WOF23	0	0	-10	0	-10	0
△	81WOF23	0	0	-20	0	-20	0
◇	81WOF23	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 51. Continued.

TEST CENTER NSRDC TEST 7

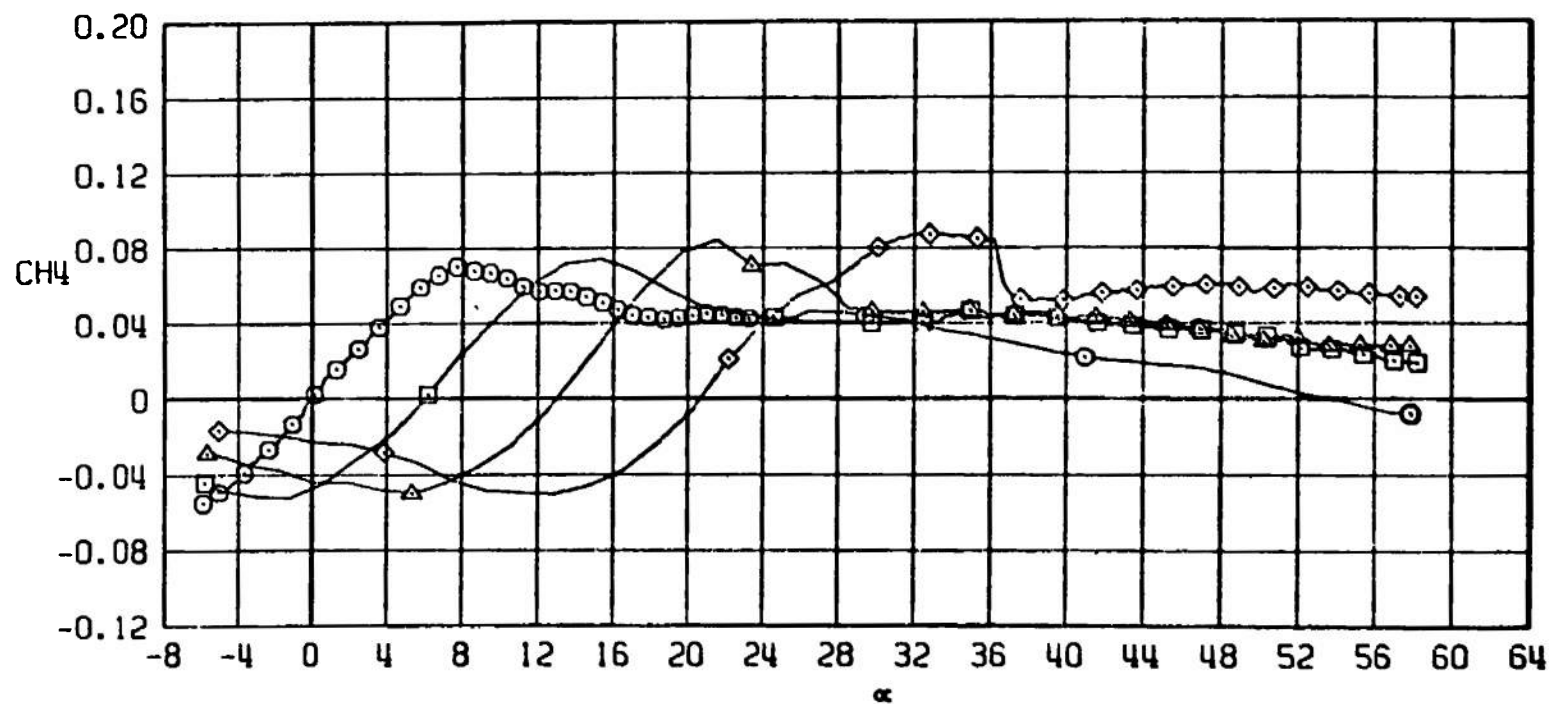
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



j. CB4 versus α
Figure 51. Continued.

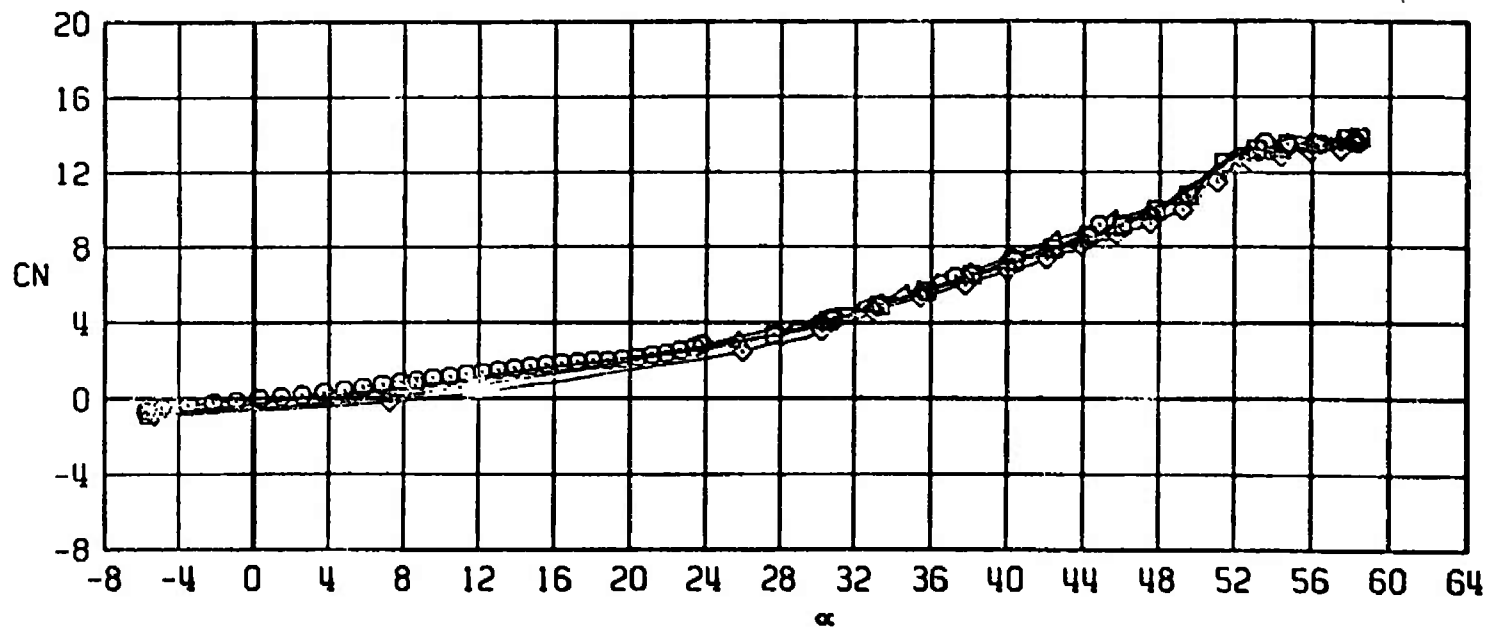
TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 51. Concluded.

TEST CENTER NSRDC TEST 7							
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F23	0	0	0	0	0	0
□	B1W0F23	0	0	-10	0	-10	0
△	B1W0F23	0	0	-20	0	-20	0
◇	B1W0F23	0	0	-30	0	-30	0

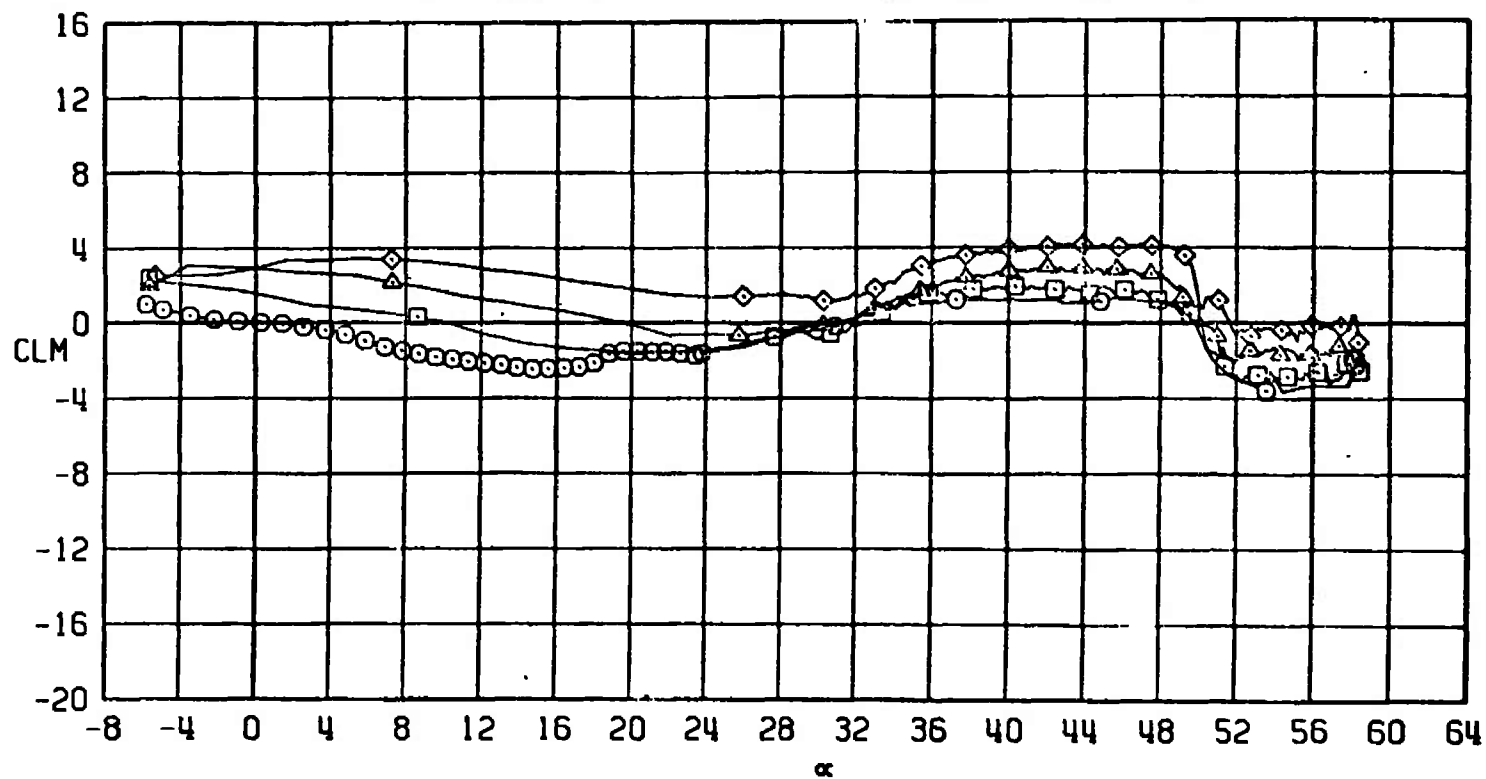


a. CN versus α

Figure 52. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F23 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.9$.

TEST CENTER NSRDC TEST 7

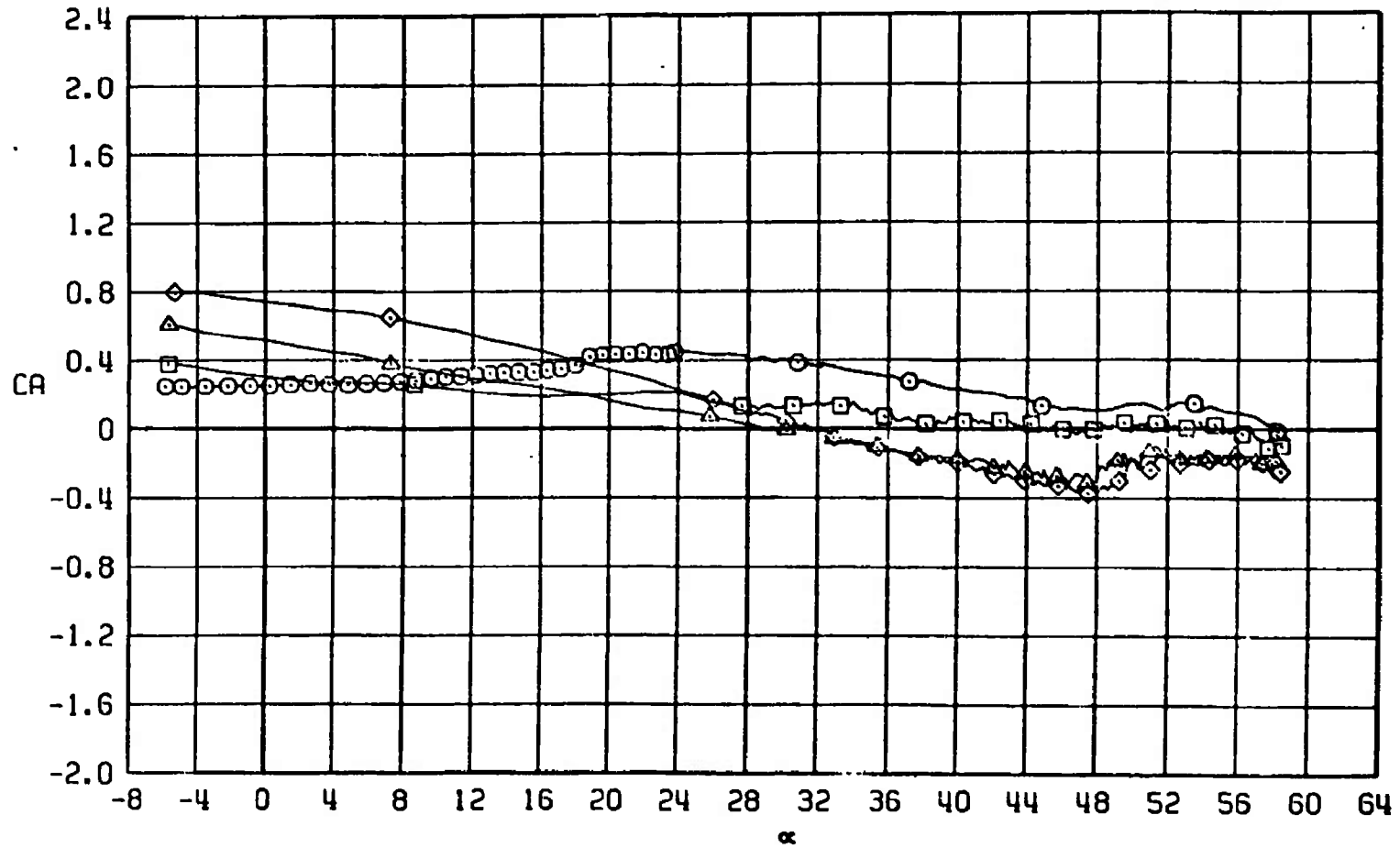
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



b. CLM versus α
Figure 52. Continued.

TEST CENTER NSRDC TEST 7

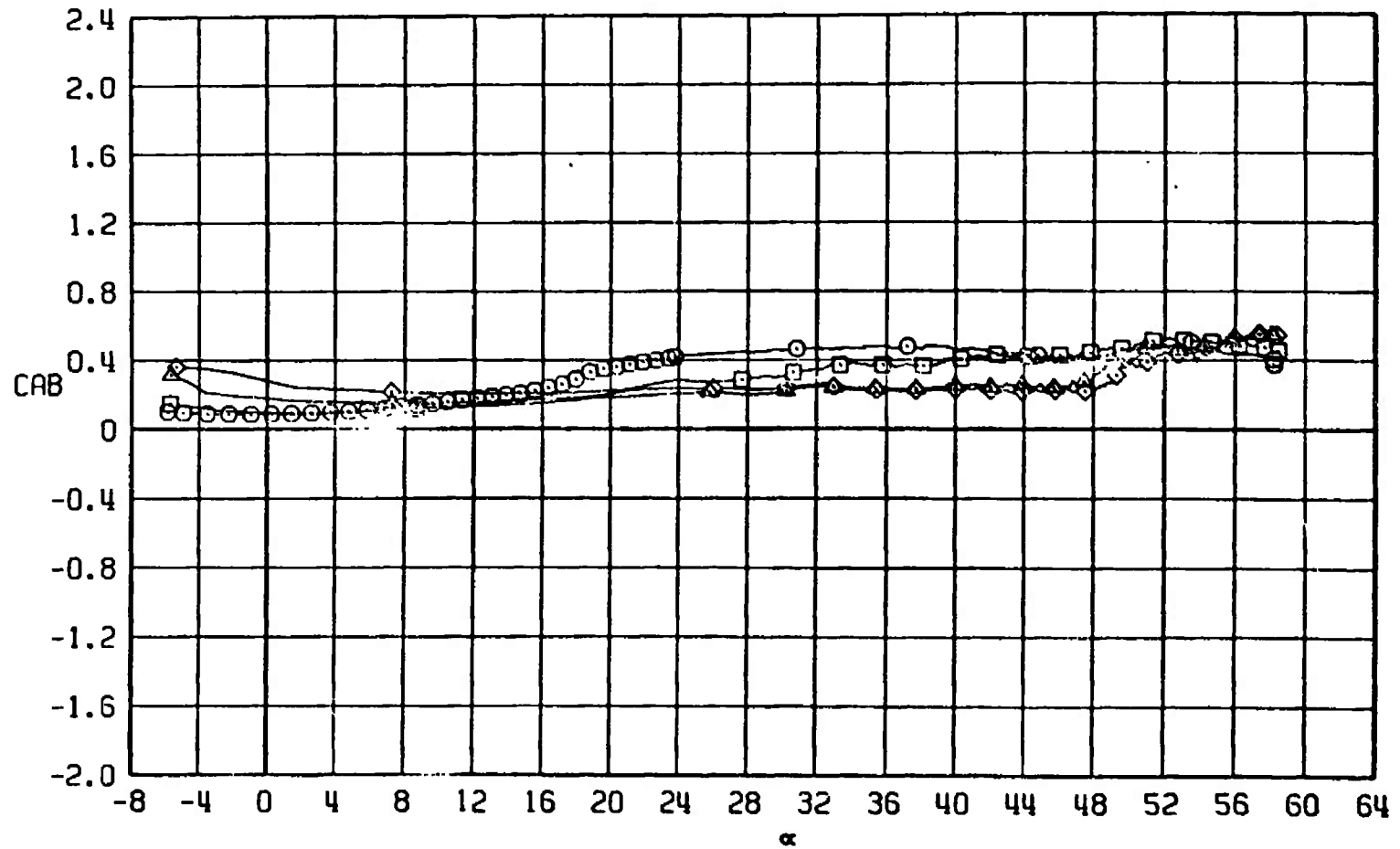
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



c. CA versus α
Figure 52. Continued.

TEST CENTER NSRDC TEST 7

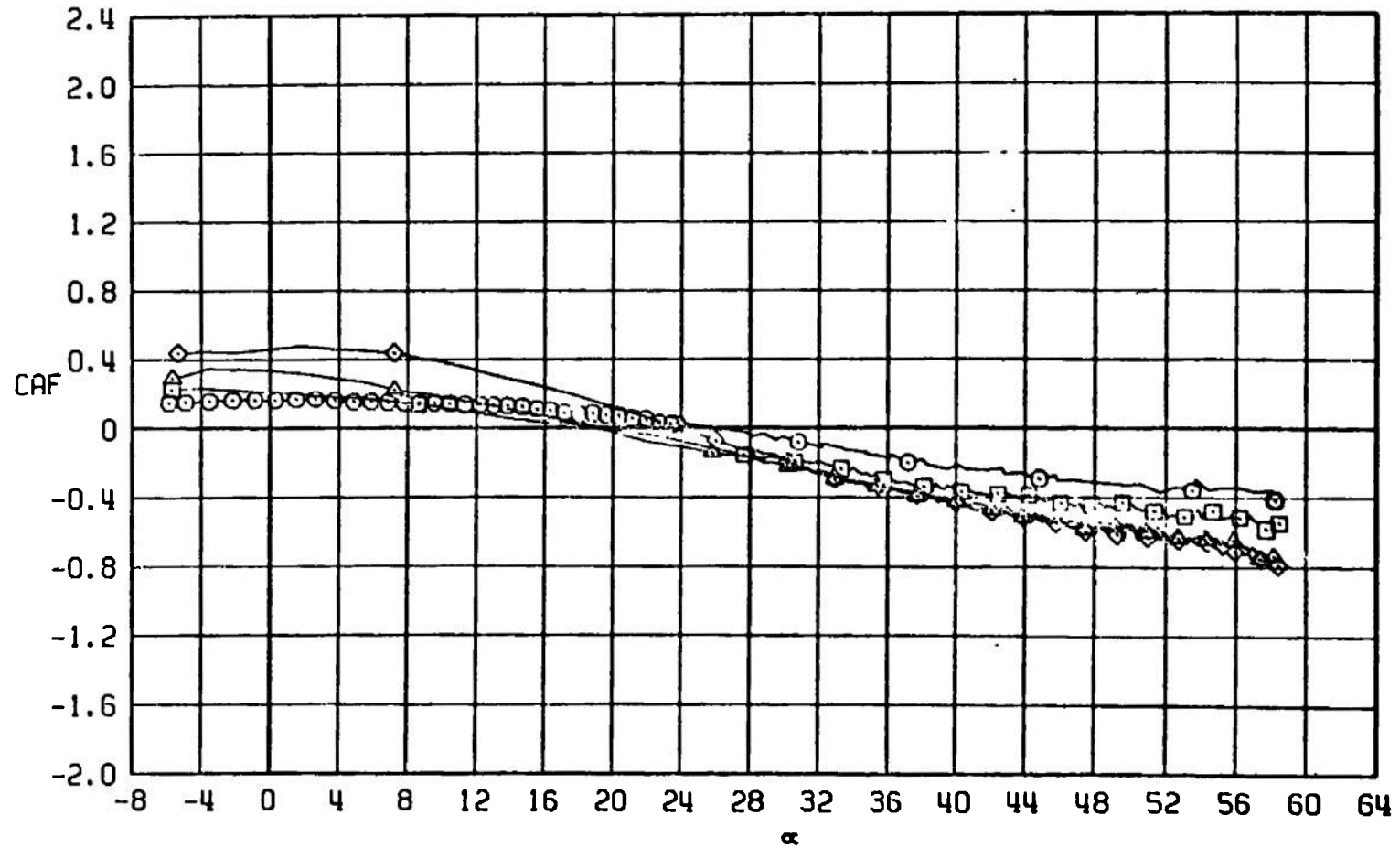
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



d. CAB versus α
Figure 52. Continued.

TEST CENTER NSRDC TEST 7

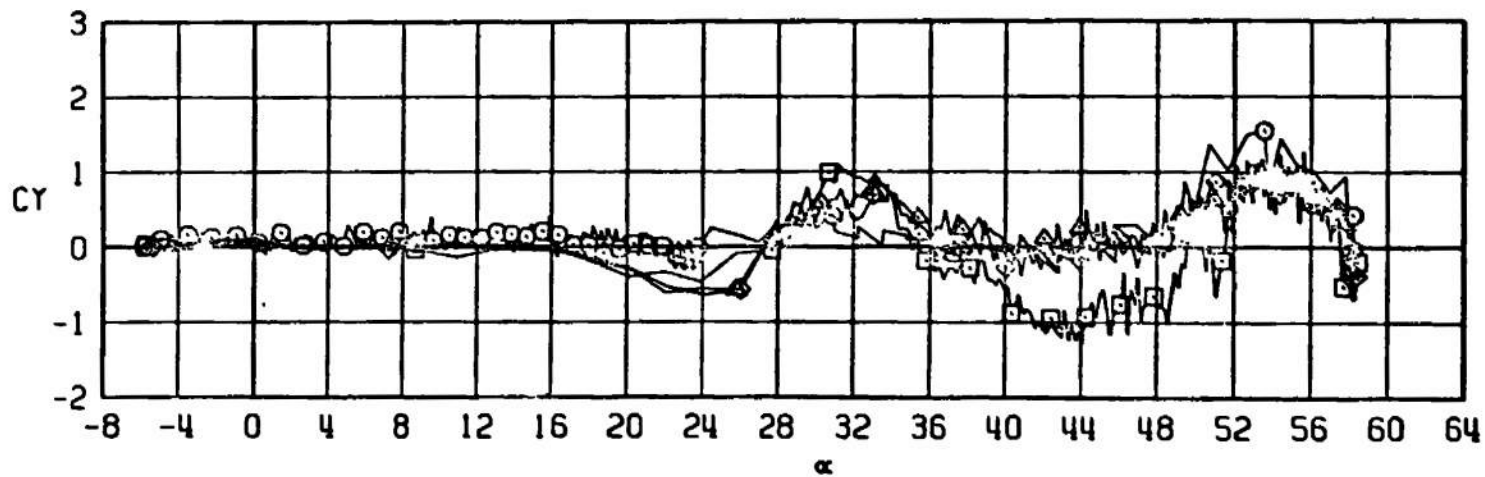
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



e. CAF versus α
Figure 52. Continued.

TEST CENTER NSRDC TEST 7

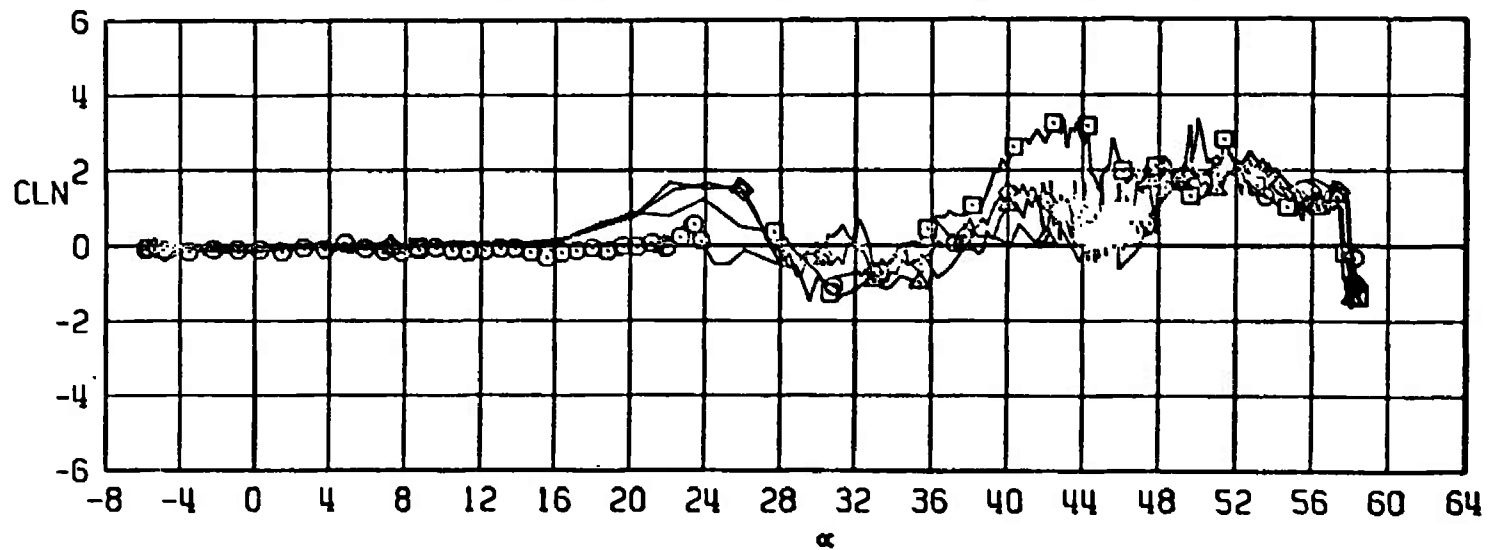
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



f. CY versus α
Figure 52. Continued.

TEST CENTER NSRDC TEST 7

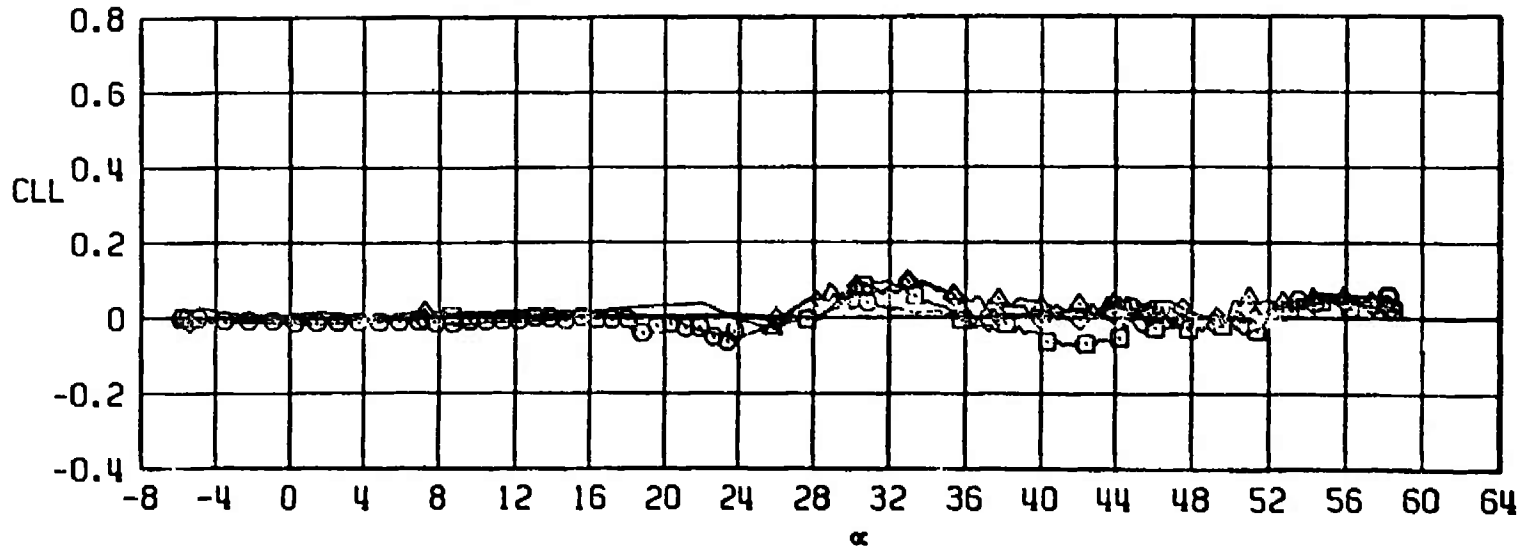
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



g. CLN versus α
Figure 52. Continued.

TEST CENTER NSROC TEST 7

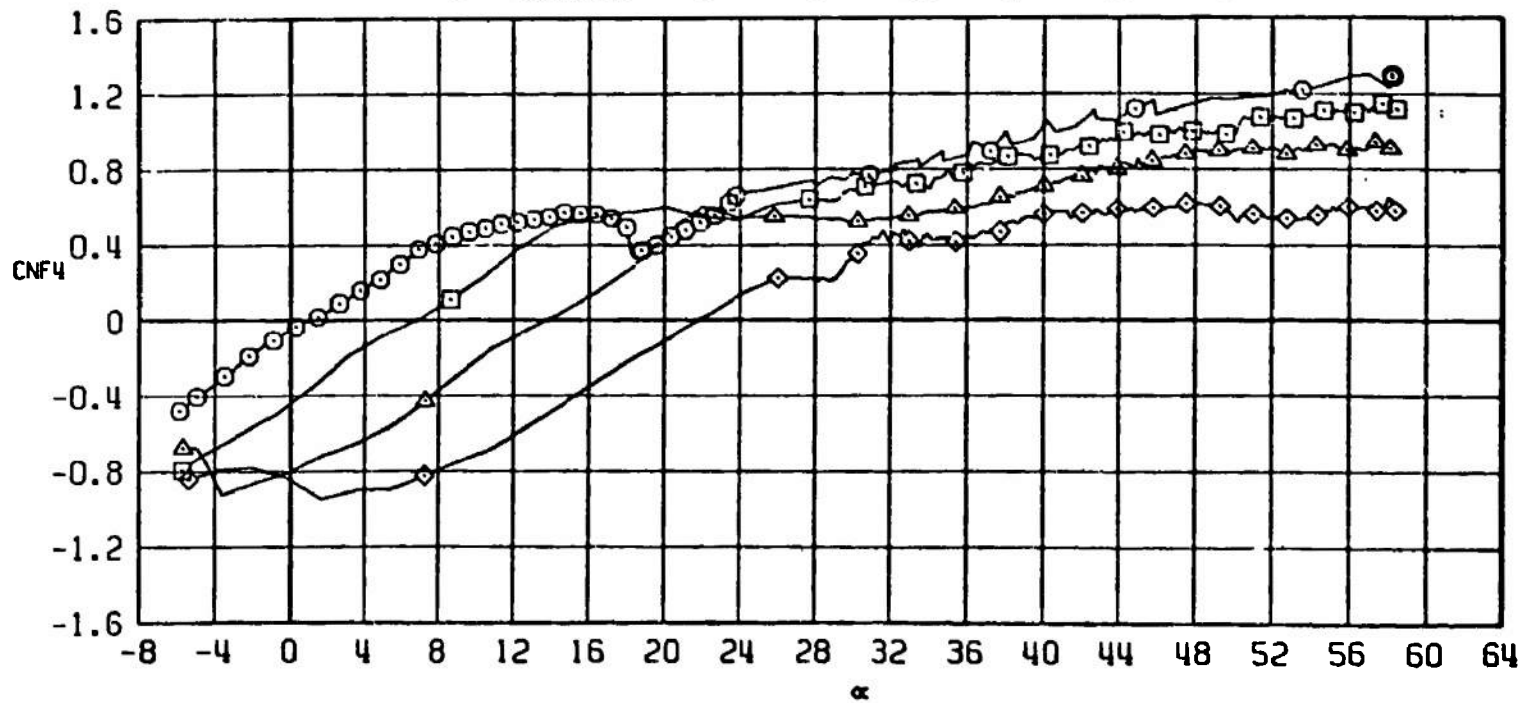
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



h. CLL versus α
Figure 52. Continued.

TEST CENTER NSRDC TEST 7

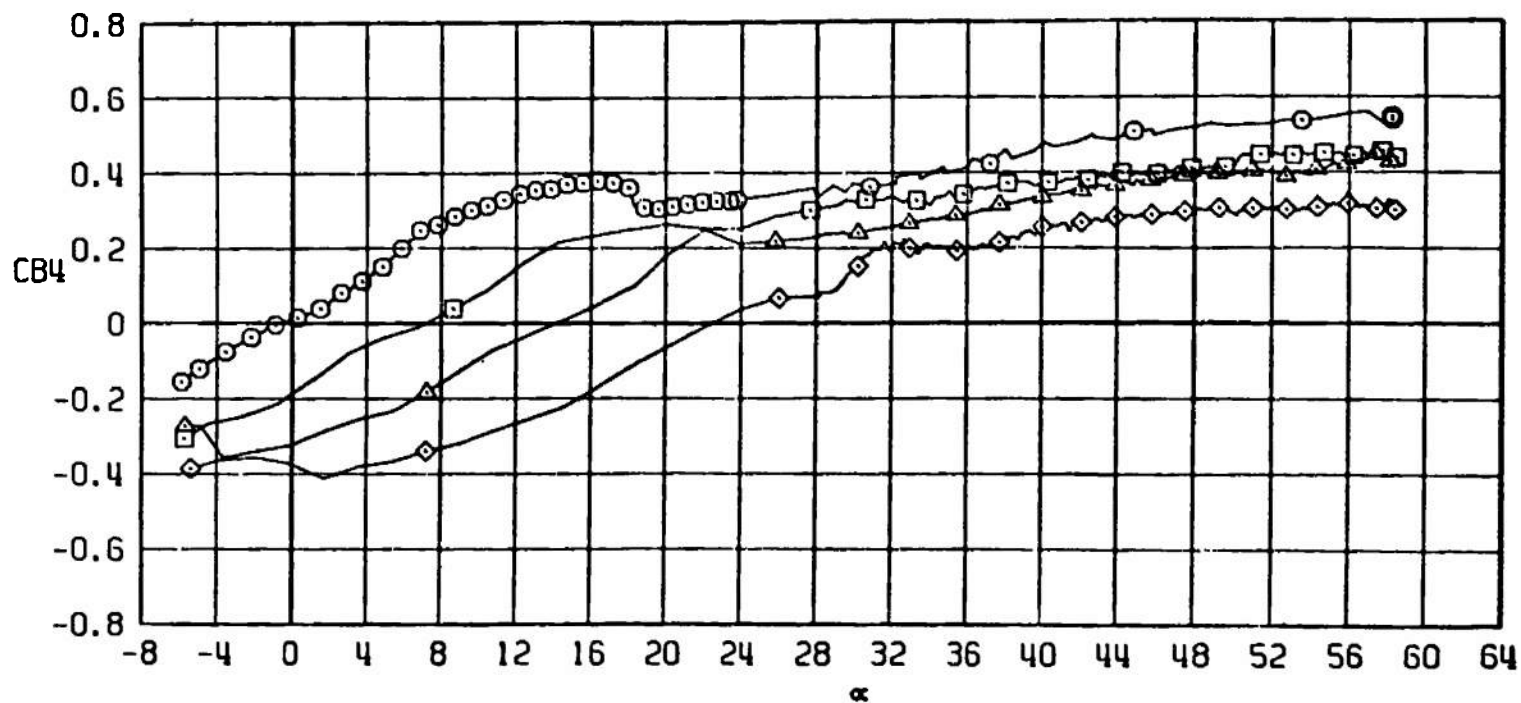
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 52. Continued.

TEST CENTER NSRDC TEST 7

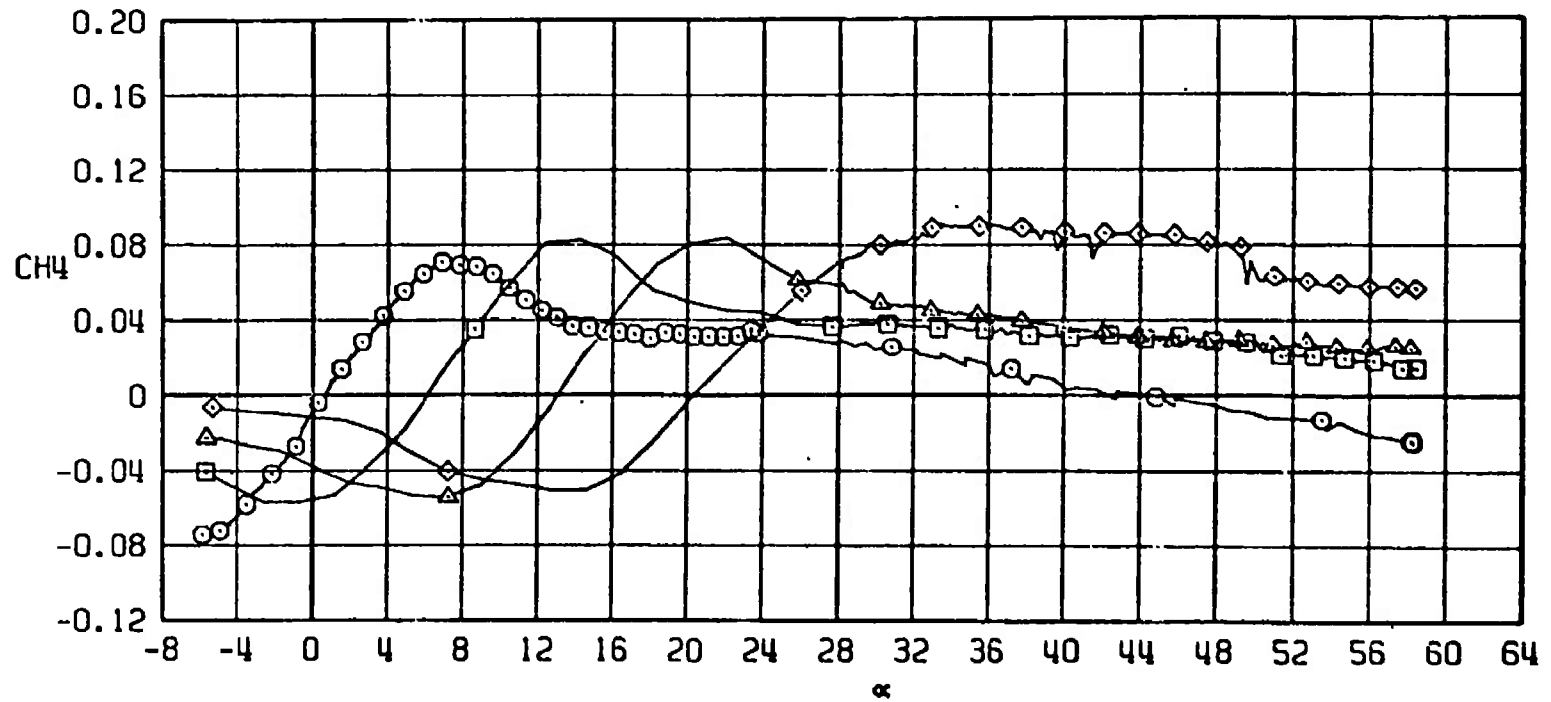
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



j. CB_4 versus α
Figure 52. Continued.

TEST CENTER NSRDC TEST 7

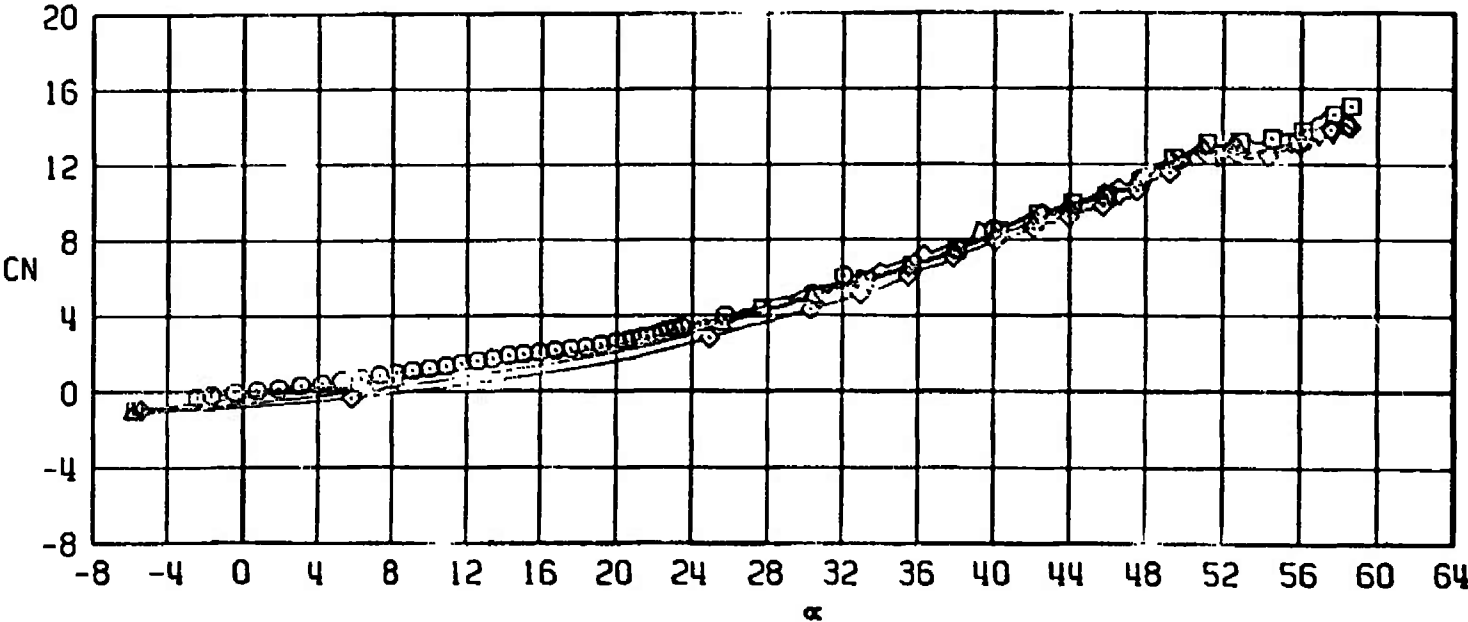
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF23	0	0	0	0	0	0
□	B1WOF23	0	0	-10	0	-10	0
△	B1WOF23	0	0	-20	0	-20	0
◇	B1WOF23	0	0	-30	0	-30	0



k. CH4 versus α
Figure 52. Concluded.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF23	0	0	0	0	0	0
□	B1WOF23	0	0	-10	0	-10	0
△	B1WOF23	0	0	-20	0	-20	0
◇	B1WOF23	0	0	-30	0	-30	0

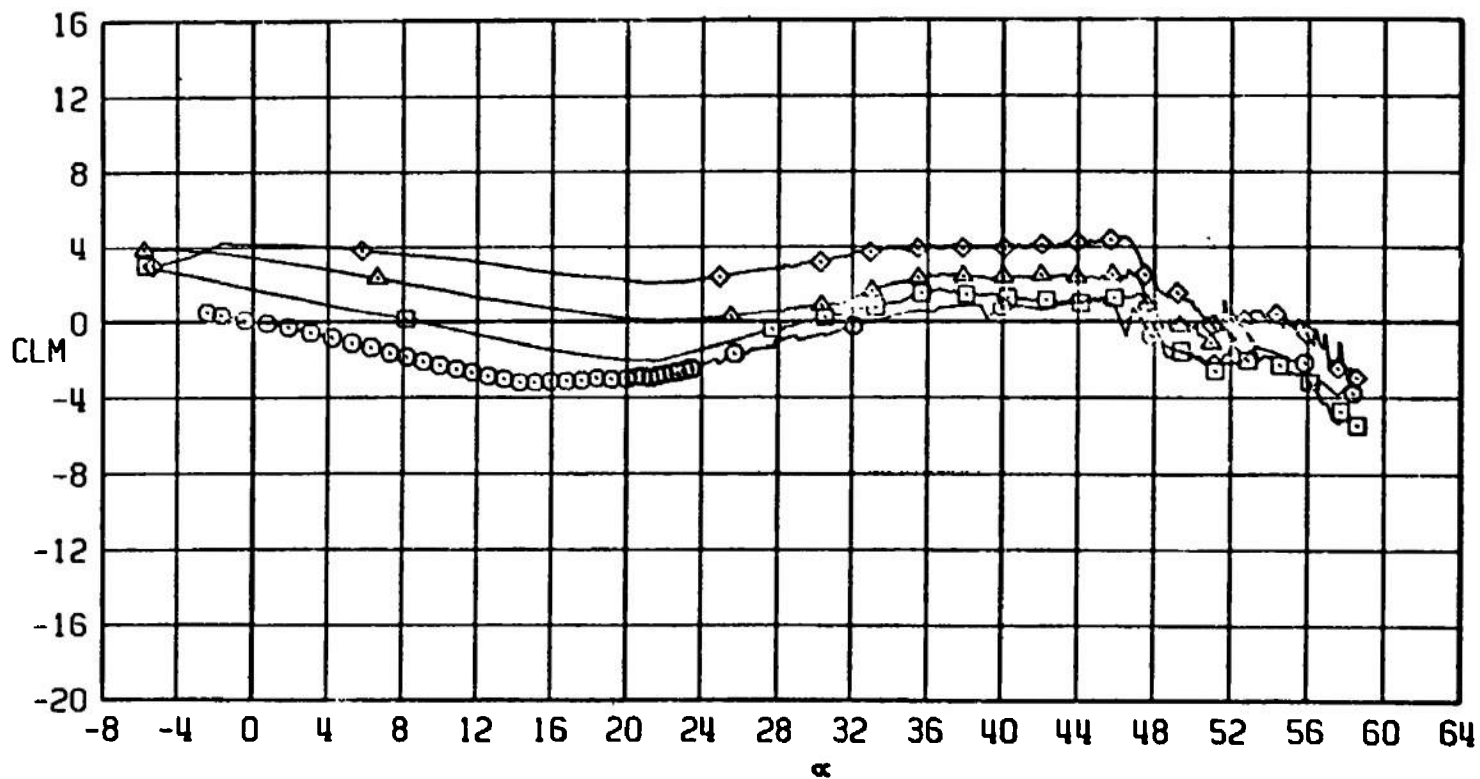


a. CN versus α

Figure 53. Test No. 7, comparison of aerodynamic coefficients of configuration B1WOF23 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.0$.

TEST CENTER NSROC TEST 7

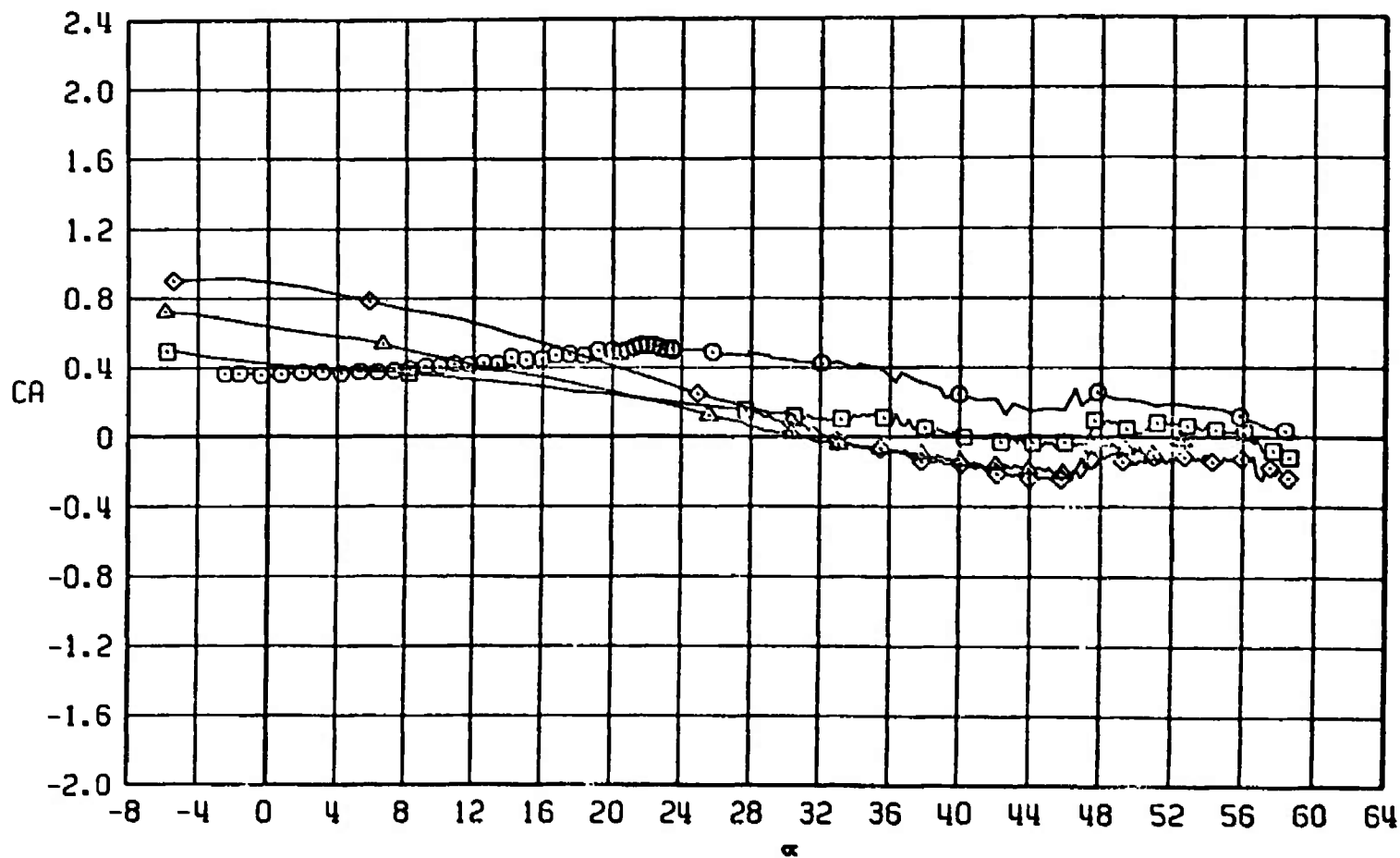
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



b. CLM versus α
Figure 53. Continued.

TEST CENTER NSRDC TEST 7

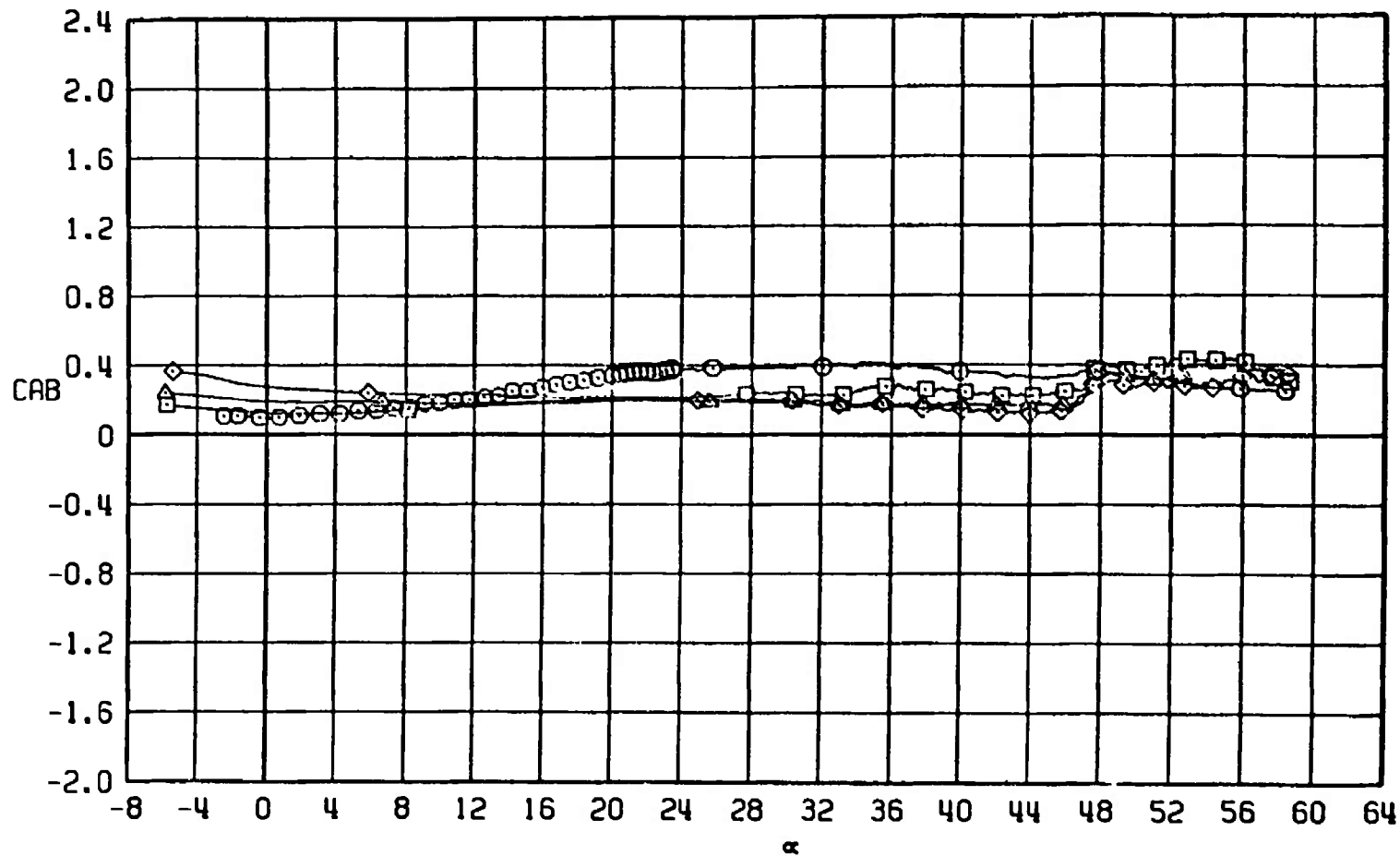
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



c. CA versus α
Figure 53. Continued.

TEST CENTER NSRDC TEST 7

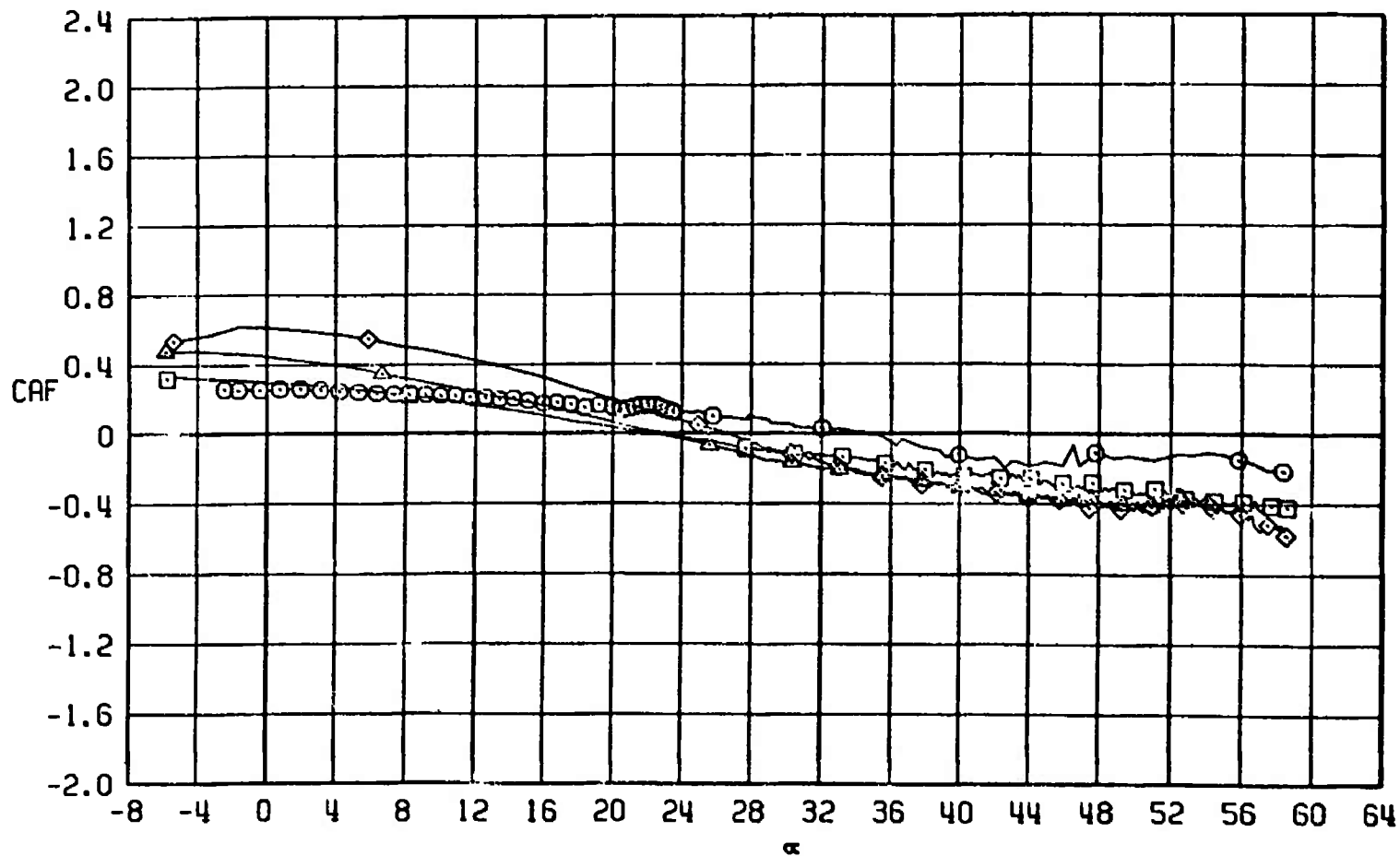
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



d. CAB versus α
Figure 53. Continued.

TEST CENTER NSRDC TEST 7

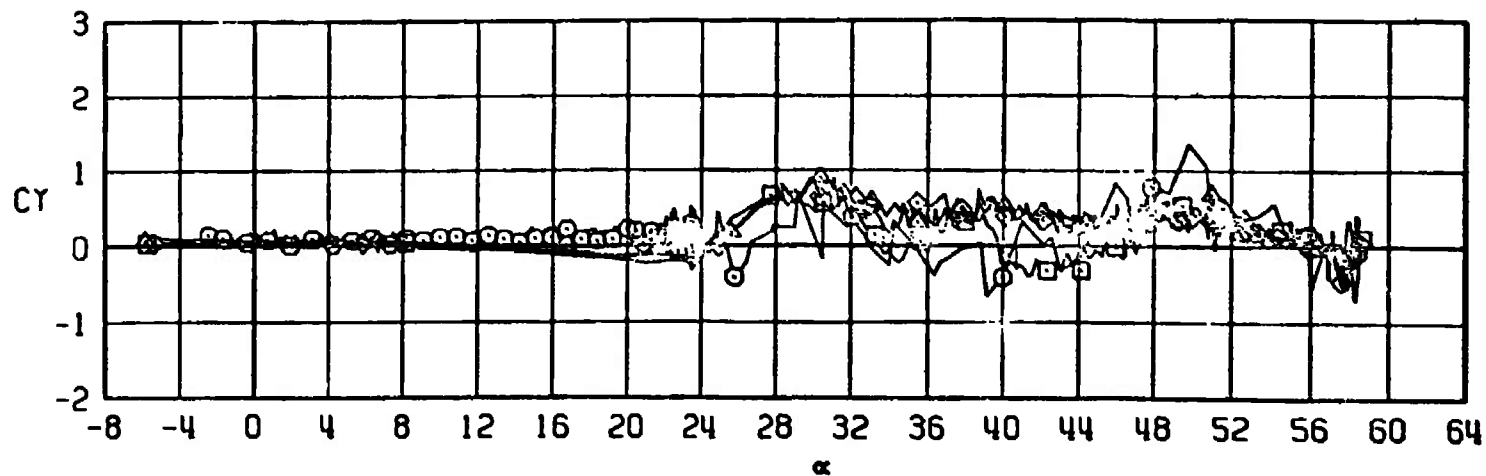
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF23	0	0	0	0	0	0
□	B1WOF23	0	0	-10	0	-10	0
△	B1WOF23	0	0	-20	0	-20	0
◇	B1WOF23	0	0	-30	0	-30	0



e. CAF versus α
Figure 53. Continued.

TEST CENTER NSRDC TEST 7

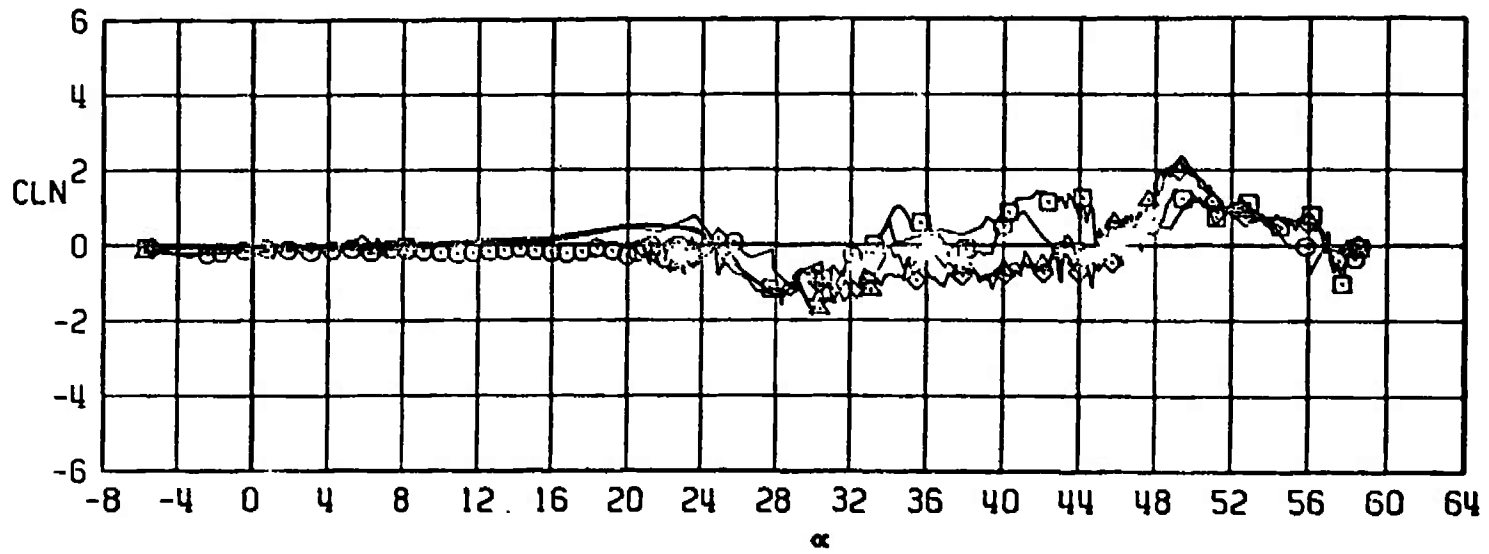
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



f. CY versus α
Figure 53. Continued.

TEST CENTER NSRDC TEST 7

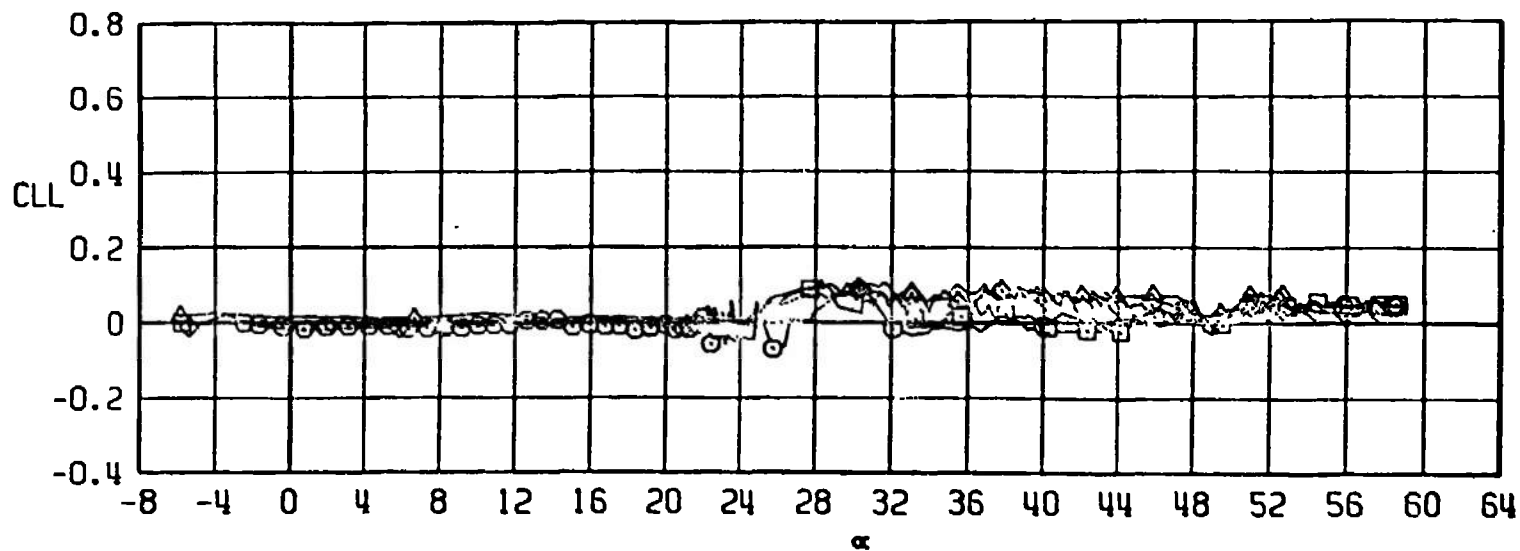
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



g. CLN versus α
Figure 53. Continued.

TEST CENTER NSRDC TEST 7

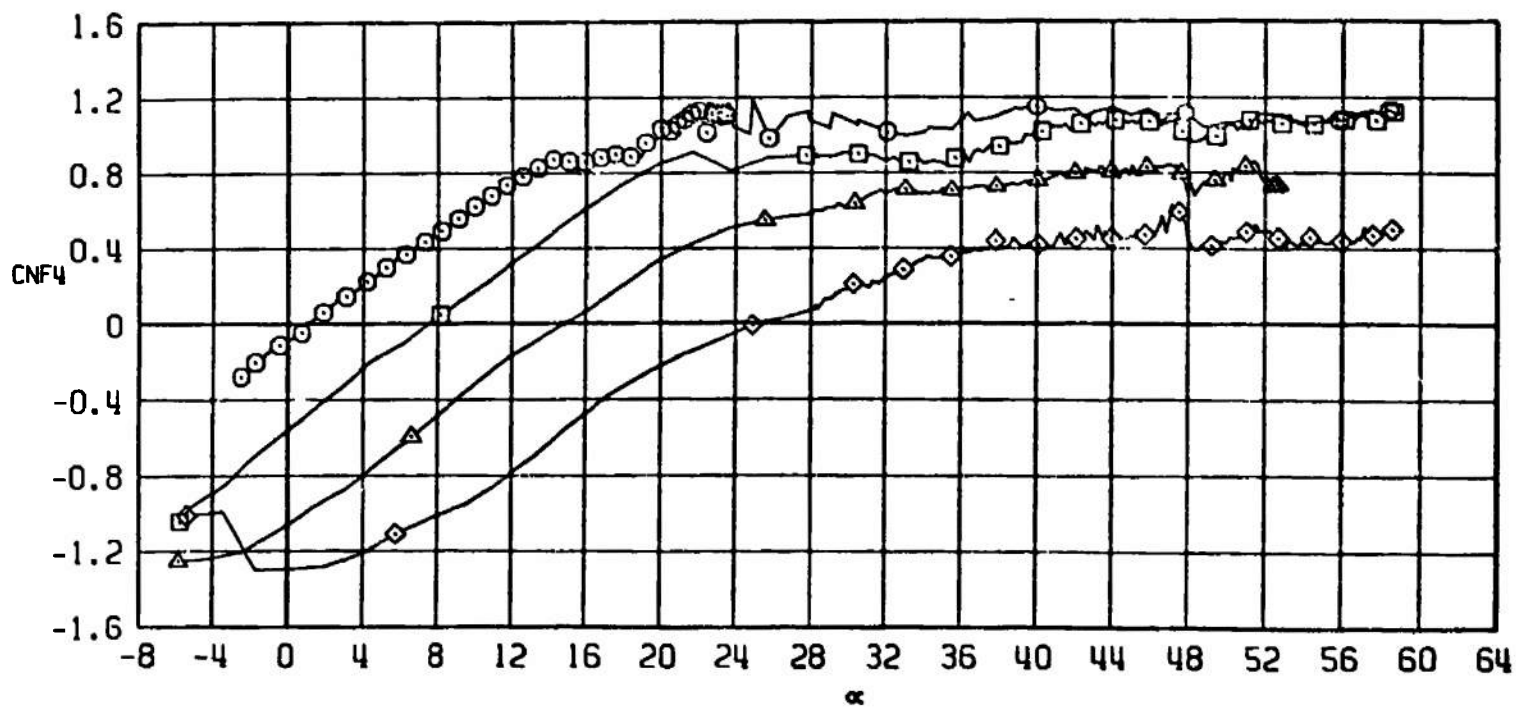
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF23	0	0	0	0	0	0
□	81WOF23	0	0	-10	0	-10	0
△	81WOF23	0	0	-20	0	-20	0
◇	81WOF23	0	0	-30	0	-30	0



h. CLL versus α
Figure 53. Continued.

TEST CENTER NSROC TEST 7

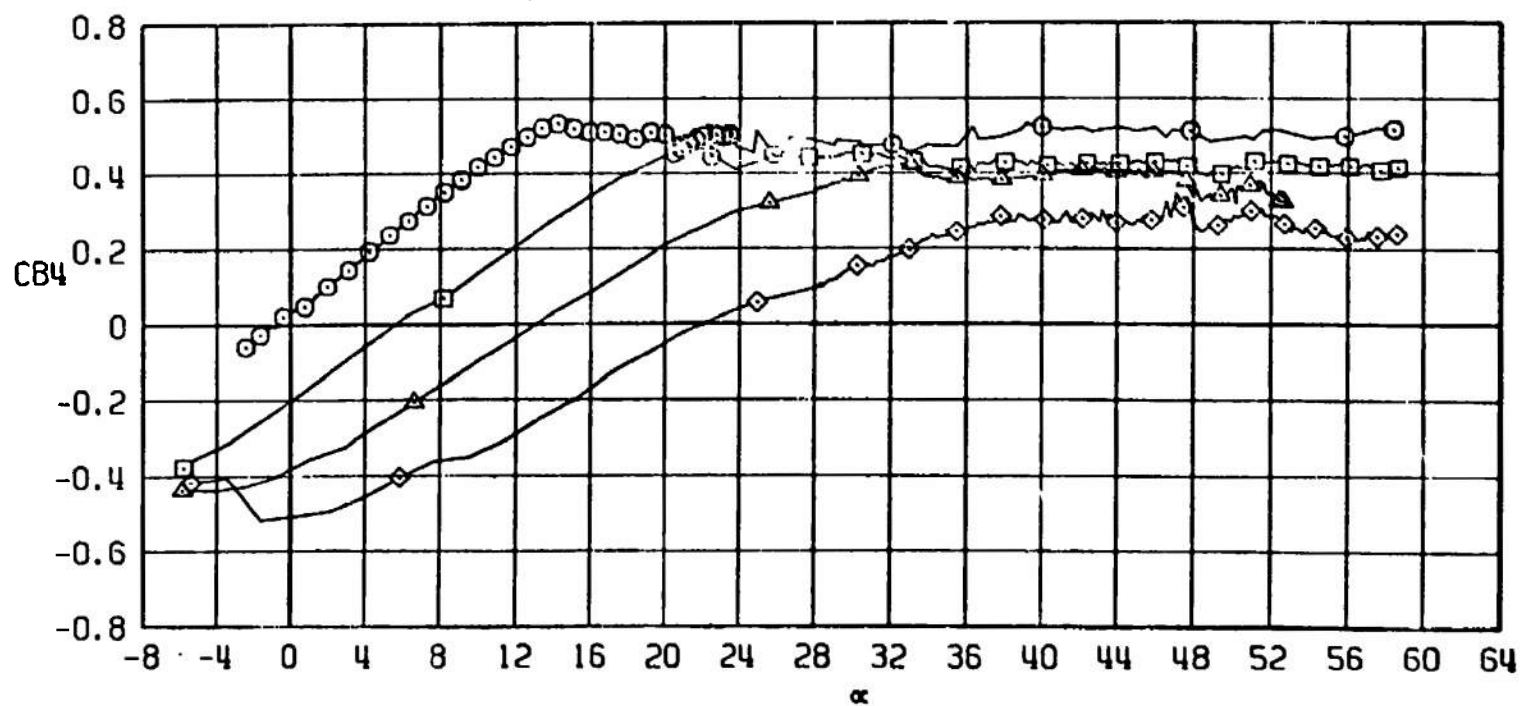
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF23	0	0	0	0	0	0
□	B1WOF23	0	0	-10	0	-10	0
△	B1WOF23	0	0	-20	0	-20	0
◇	B1WOF23	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 53. Continued.

TEST CENTER NSROC TEST 7

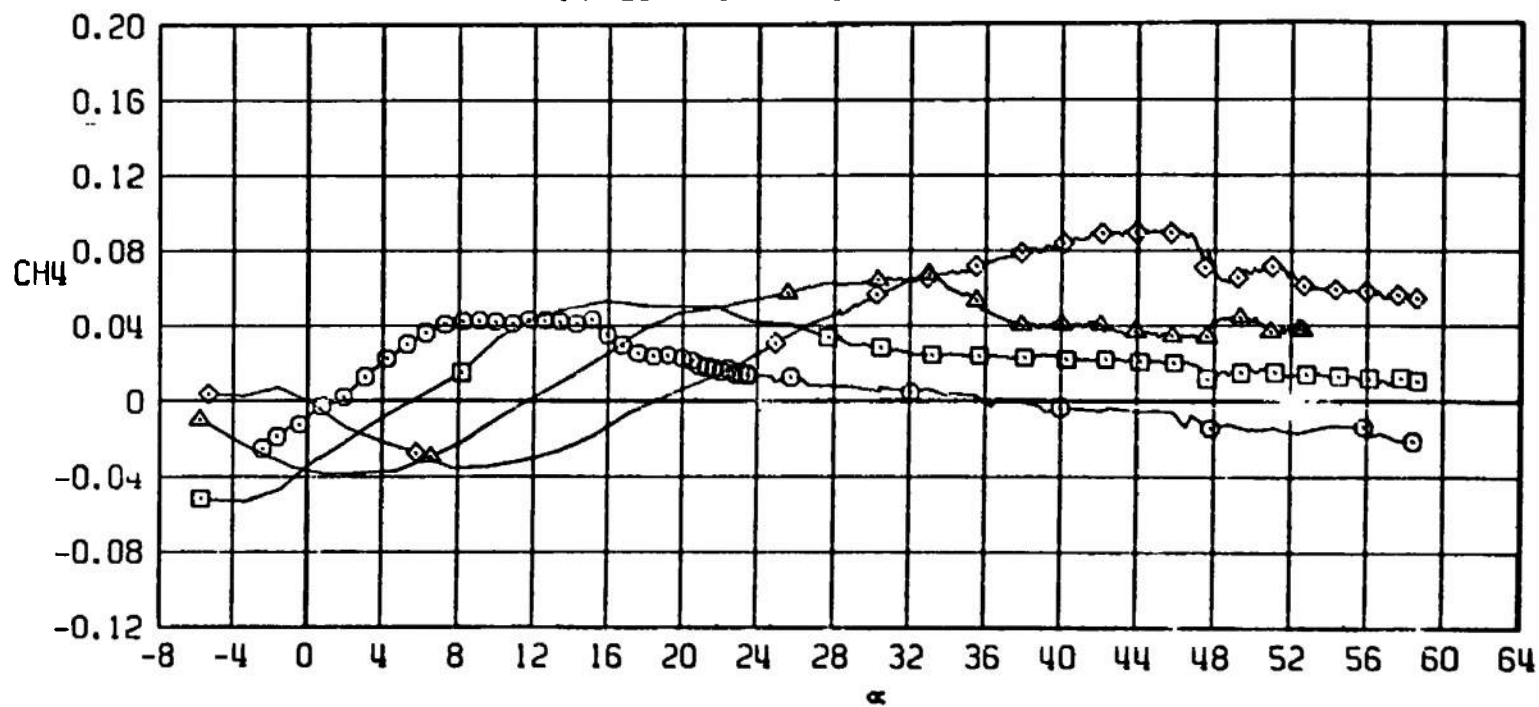
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



j. CB4 versus α
Figure 53. Continued.

TEST CENTER NSRDC TEST 7

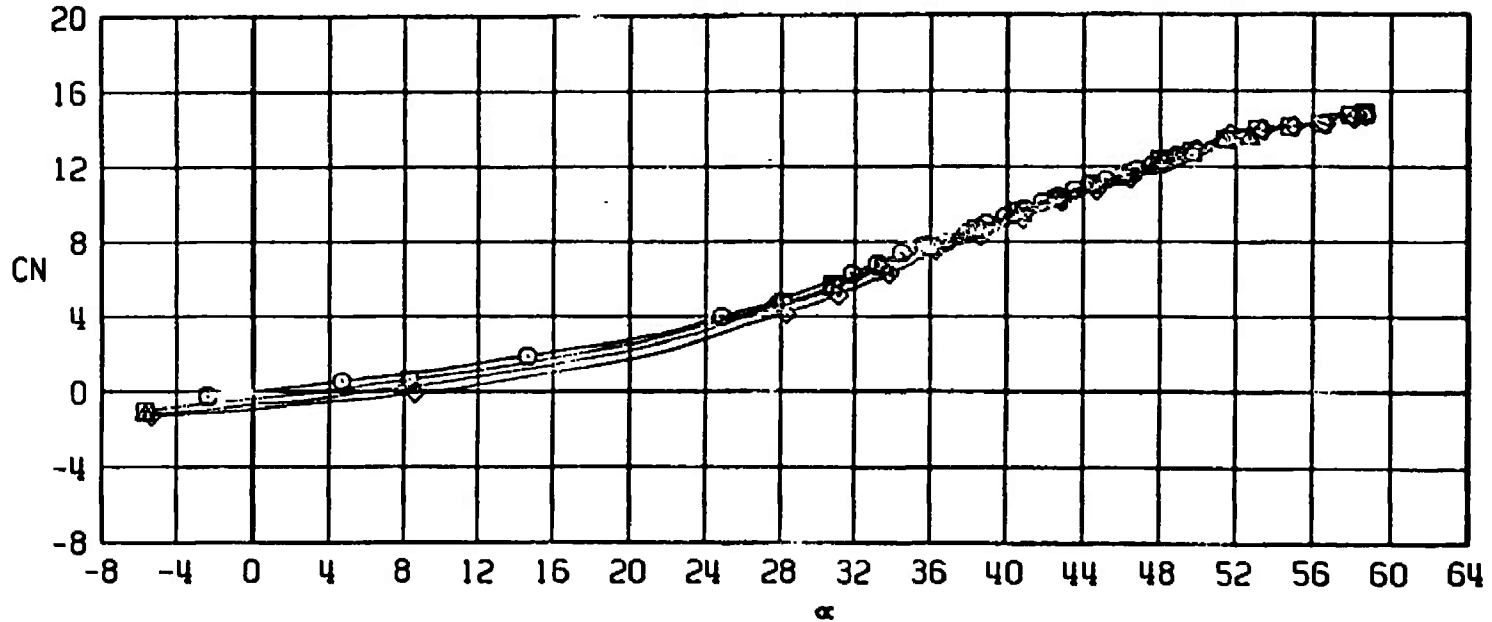
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 53. Concluded.

TEST CENTER NSROC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F23	0	0	0	0	0	0
□	B1W0F23	0	0	-10	0	-10	0
△	B1W0F23	0	0	-20	0	-20	0
◇	B1W0F23	0	0	-30	0	-30	0

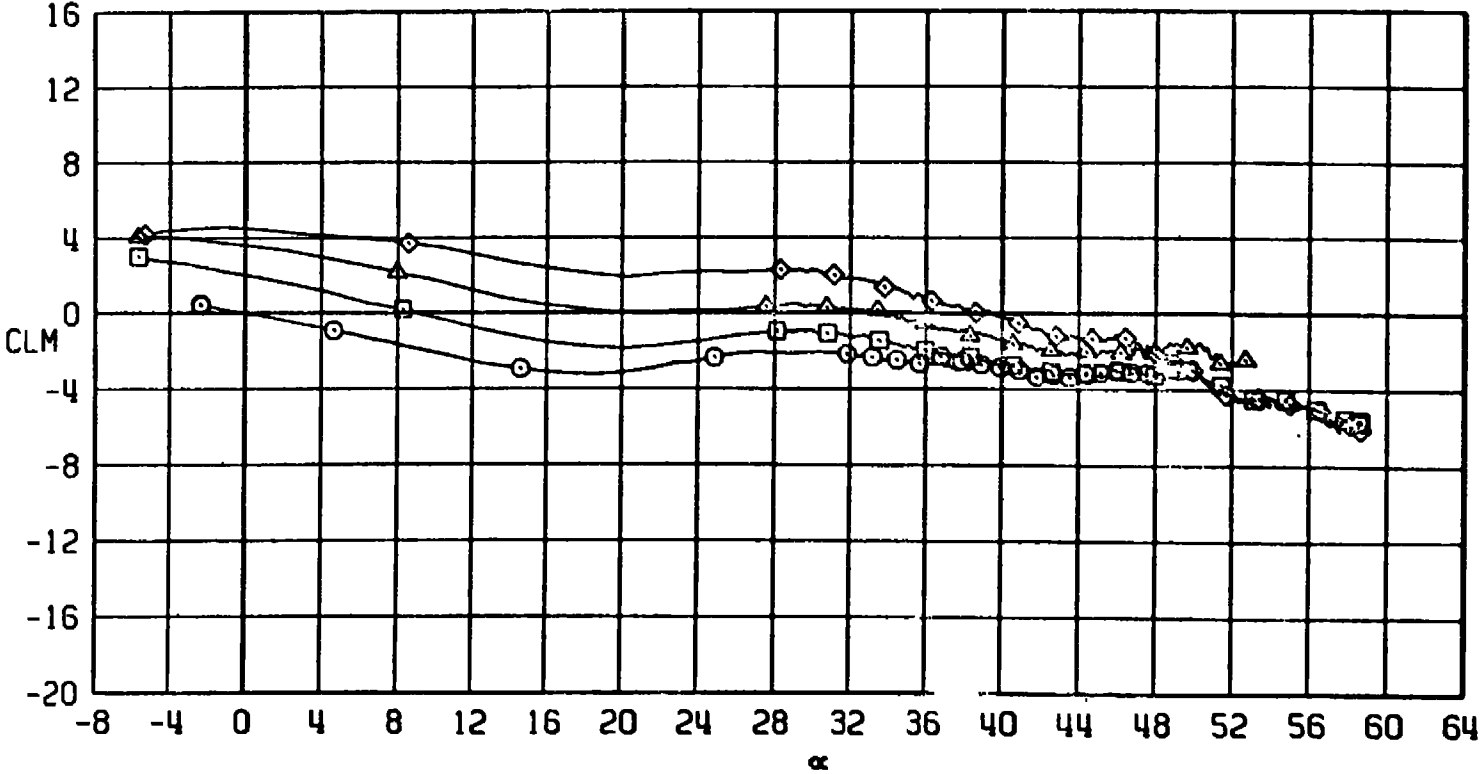


a. C_N versus α

Figure 54. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F23 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.1$.

TEST CENTER NSRDC TEST 7

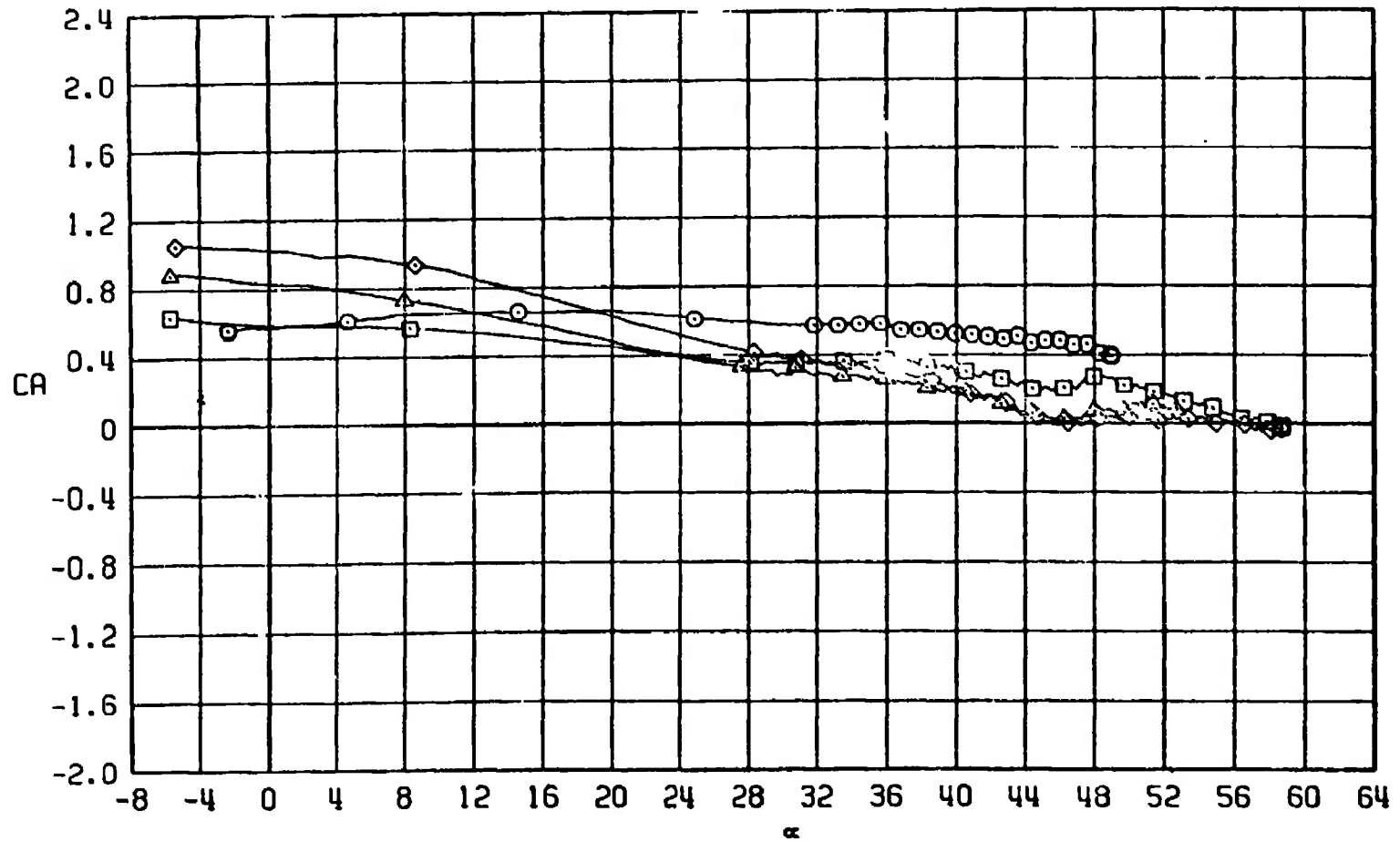
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



b. CLM versus α
Figure 54. Continued.

TEST CENTER NSROC TEST 7

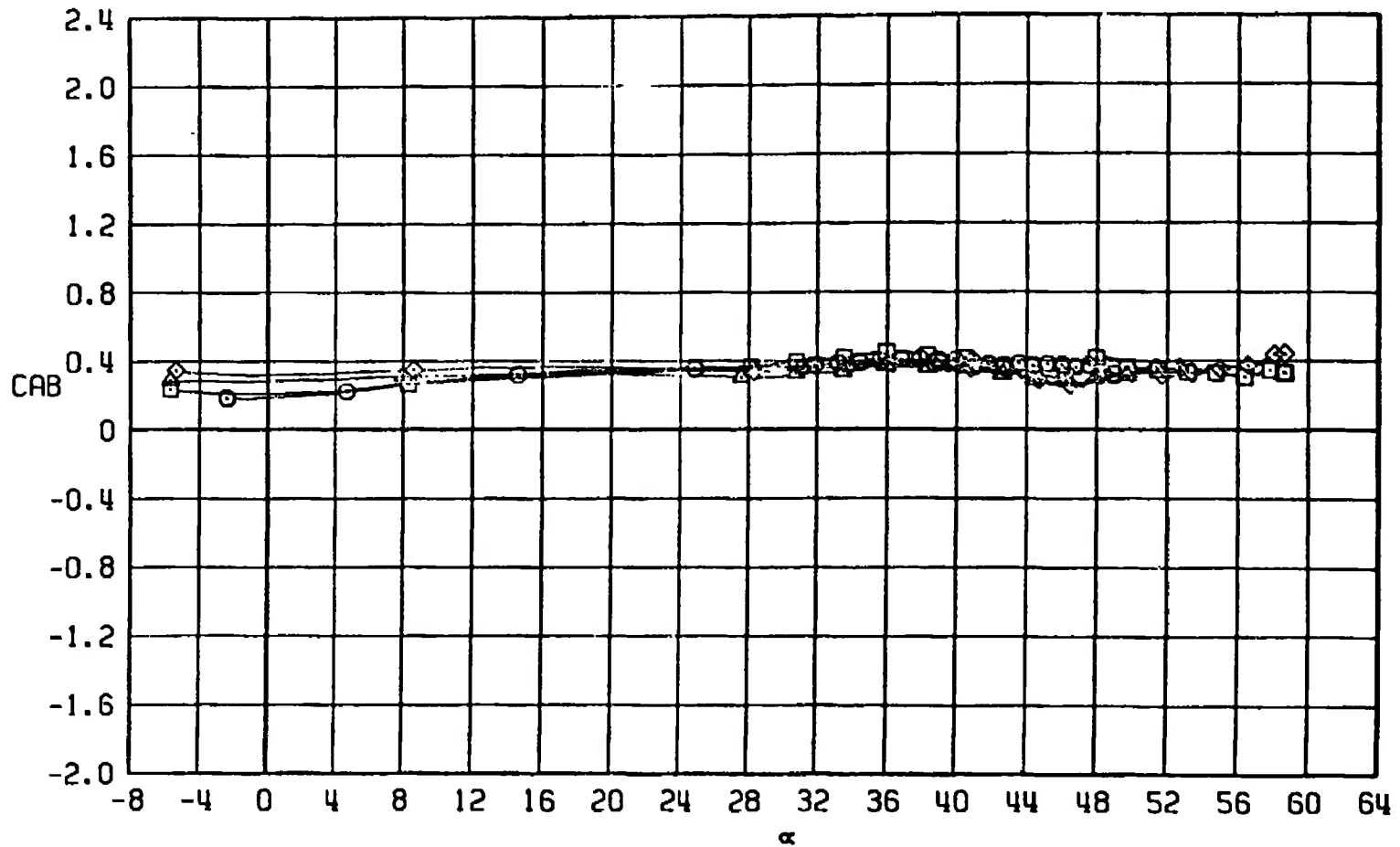
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF23	0	0	0	0	0	0
□	B1WOF23	0	0	-10	0	-10	0
△	B1WOF23	0	0	-20	0	-20	0
◇	B1WOF23	0	0	-30	0	-30	0



c. CA versus α
Figure 54. Continued.

TEST CENTER NSRDC TEST 7

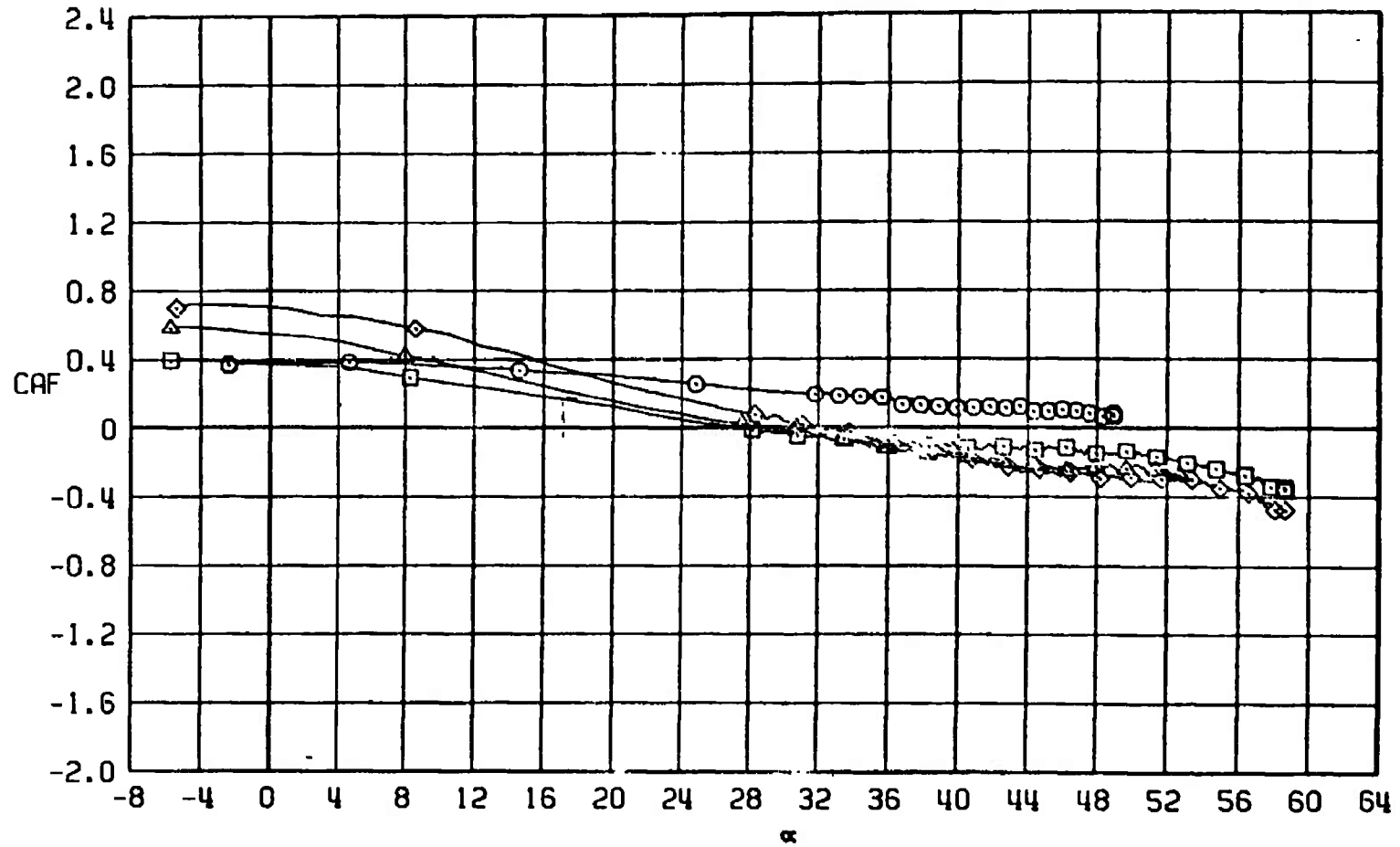
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



d. CAB versus α
Figure 54. Continued.

TEST CENTER NSRDC TEST 7

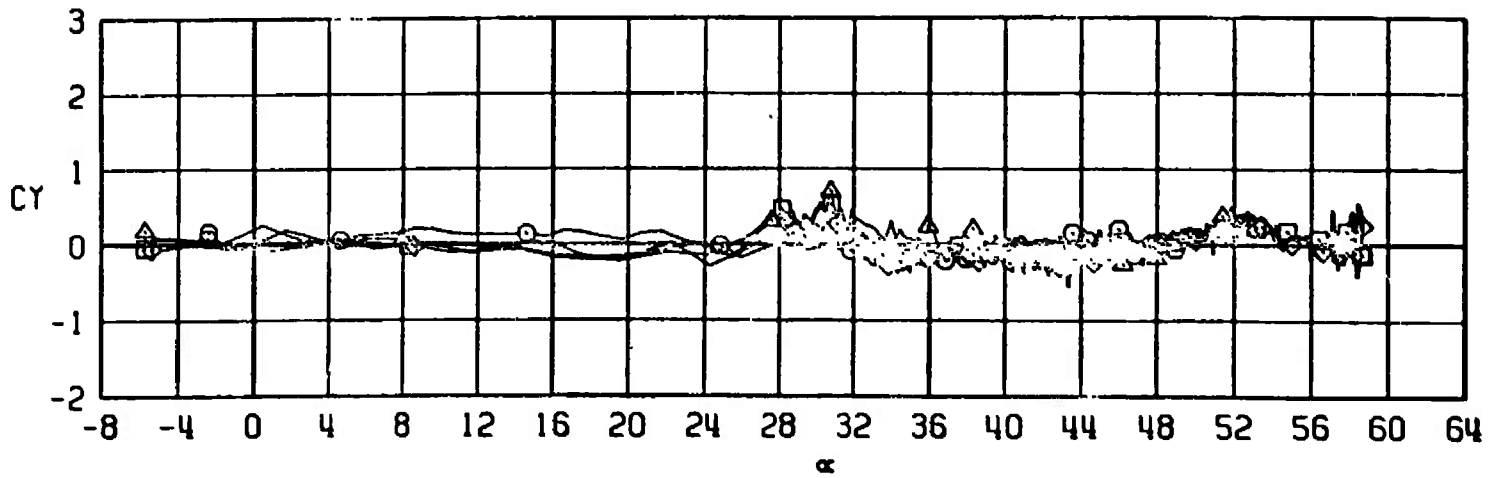
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



e. CAF versus α
Figure 54. Continued.

TEST CENTER NSRDC TEST 7

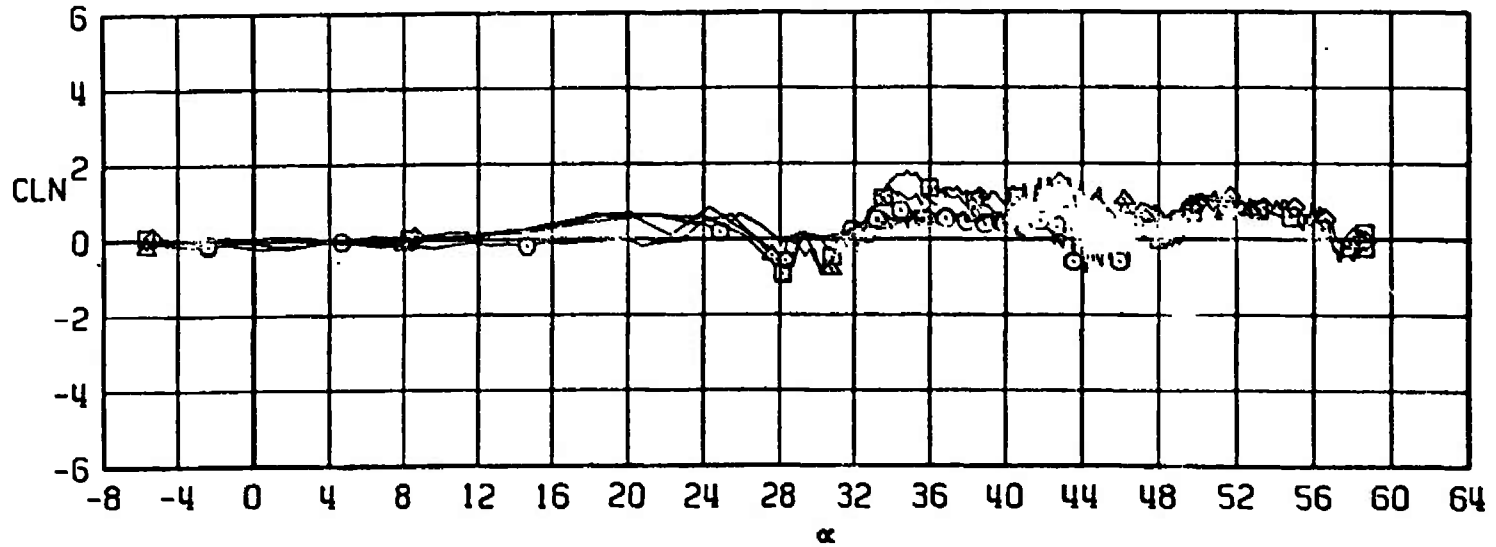
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



f. CY versus α
Figure 54. Continued.

TEST CENTER NSRDC TEST 7

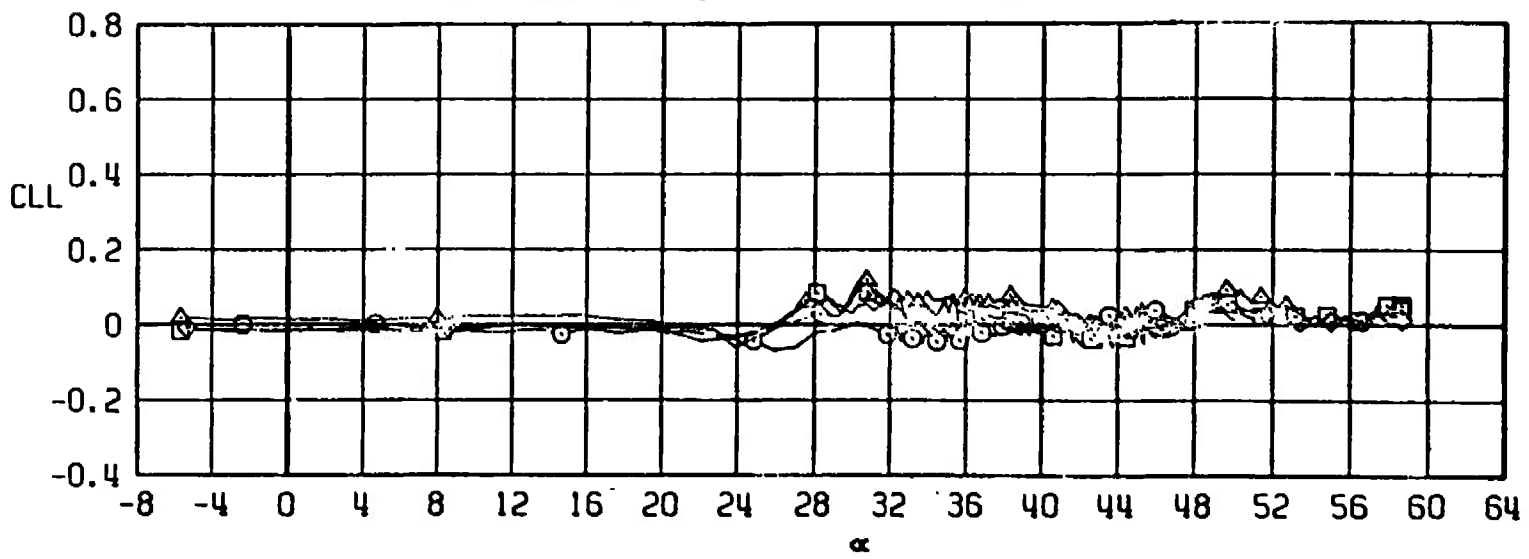
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF23	0	0	0	0	0	0
□	81WOF23	0	0	-10	0	-10	0
△	81WOF23	0	0	-20	0	-20	0
◇	81WOF23	0	0	-30	0	-30	0



g. CLN versus α
Figure 54. Continued.

TEST CENTER NSRDC TEST 7

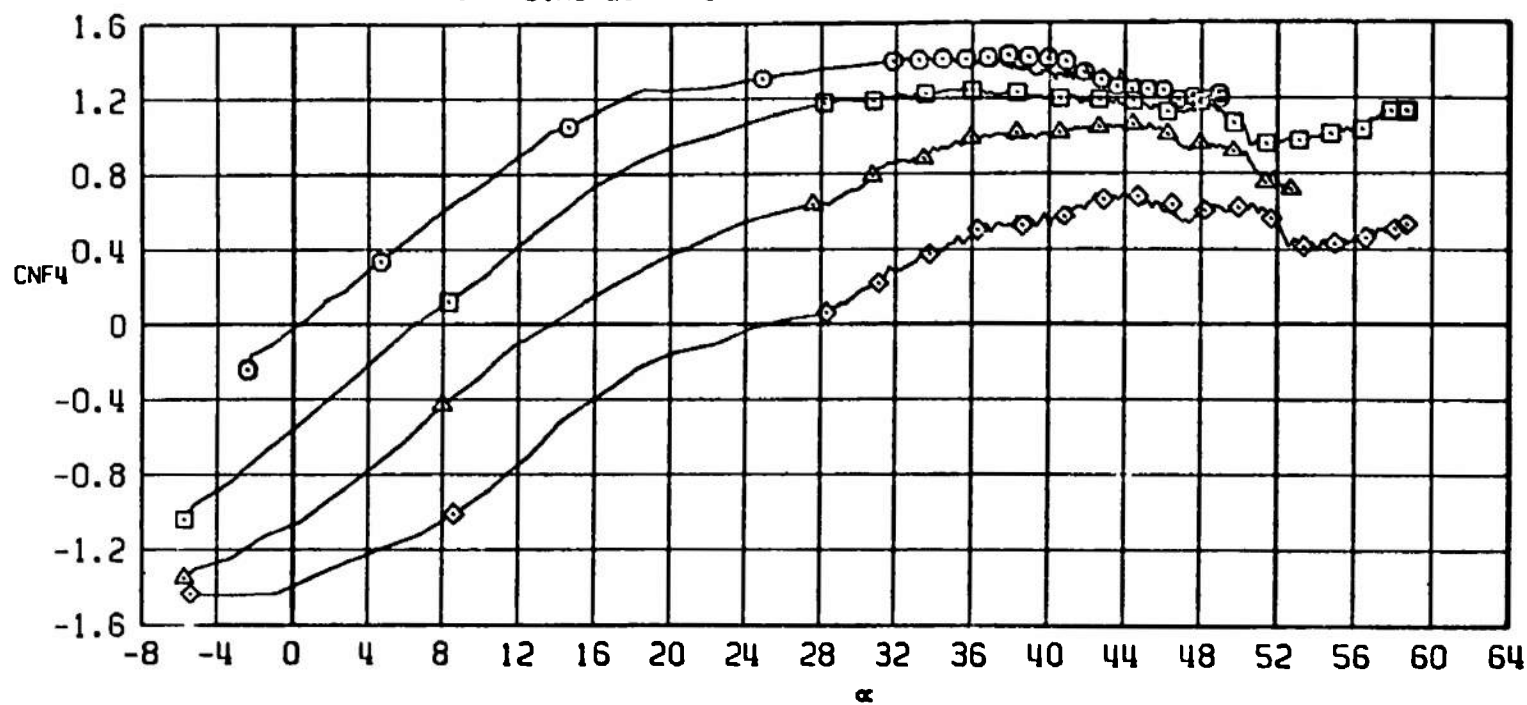
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF23	0	0	0	0	0	0
□	B1WOF23	0	0	-10	0	-10	0
△	B1WOF23	0	0	-20	0	-20	0
◇	B1WOF23	0	0	-30	0	-30	0



h. CL_L versus α
Figure 54. Continued.

TEST CENTER NSRDC TEST 7

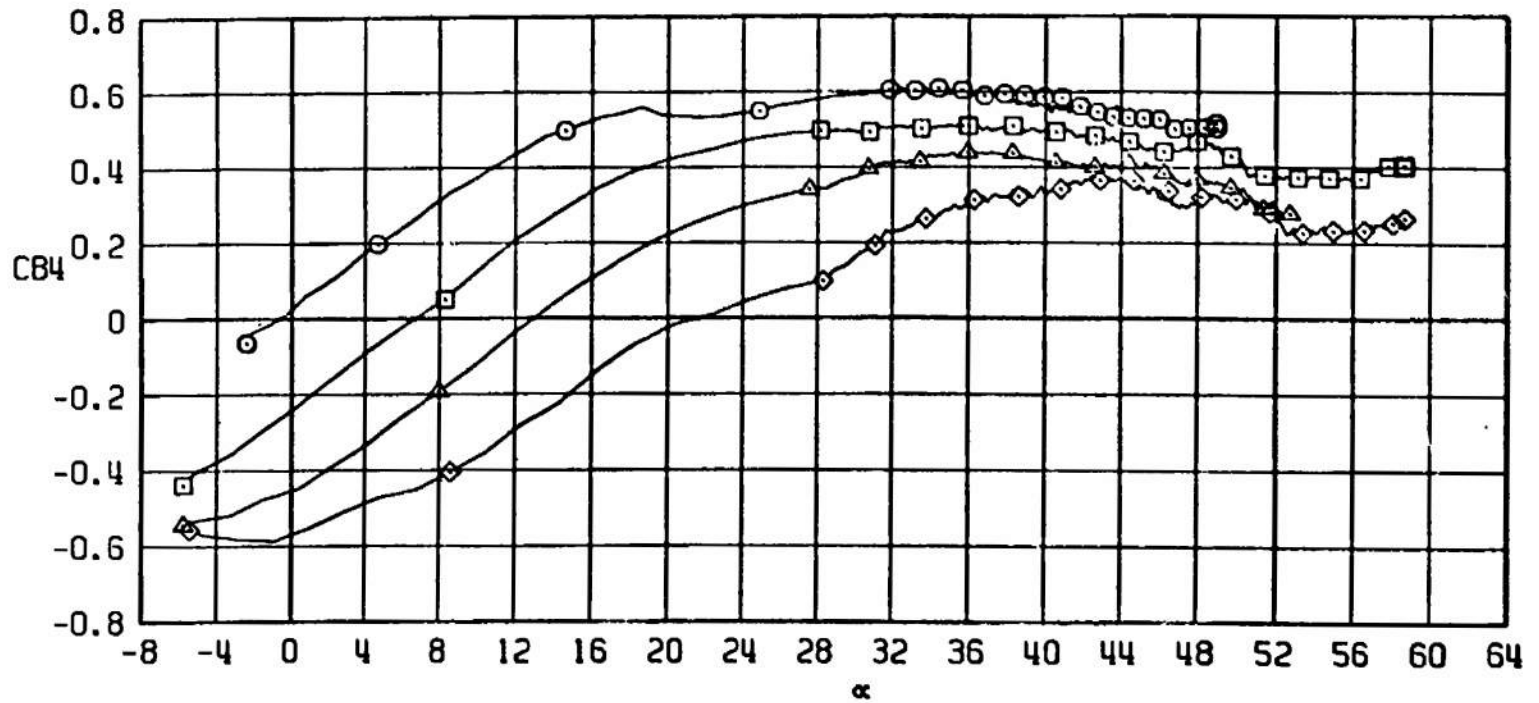
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 54. Continued.

TEST CENTER NSRDC TEST 7

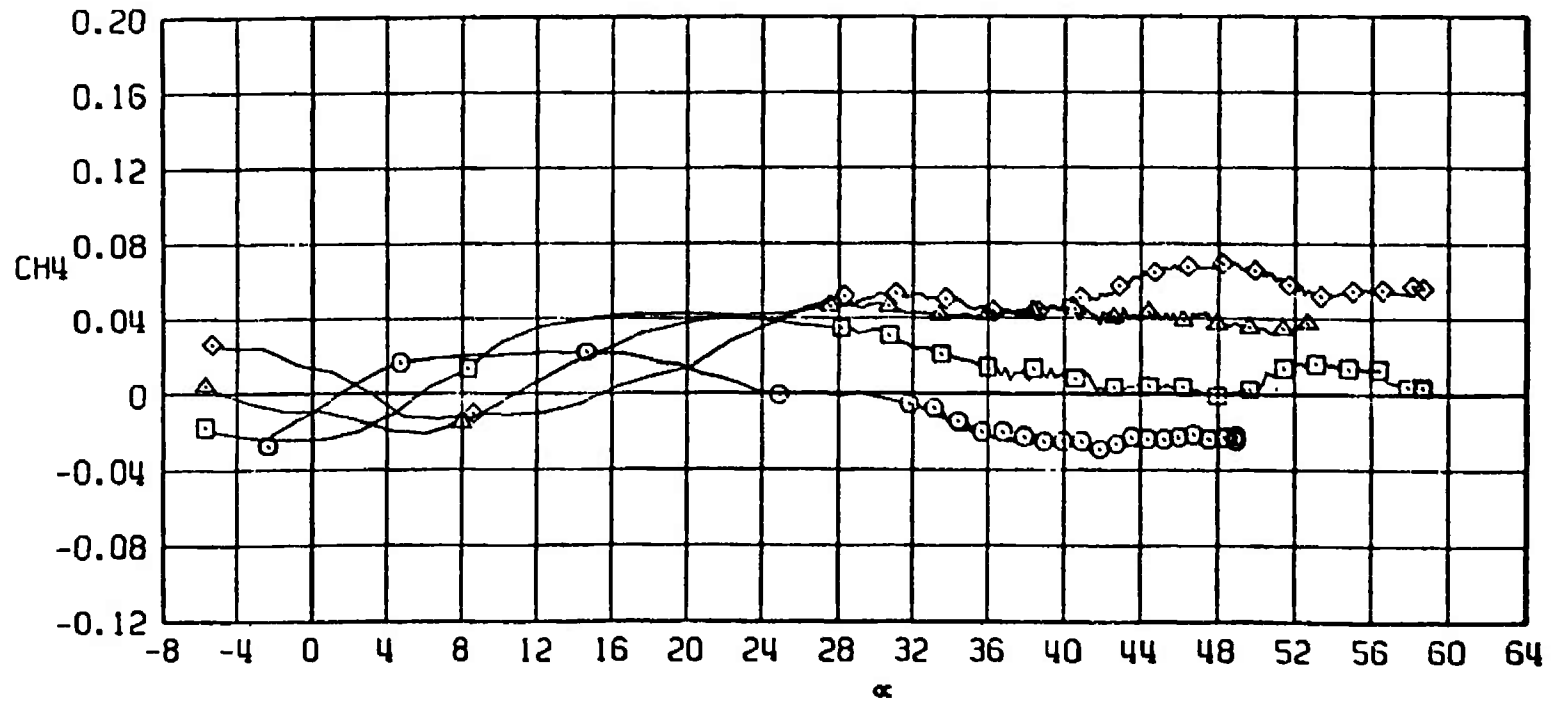
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF23	0	0	0	0	0	0
□	BIWOF23	0	0	-10	0	-10	0
△	BIWOF23	0	0	-20	0	-20	0
◇	BIWOF23	0	0	-30	0	-30	0



j. CB4 versus α
Figure 54. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF23	0	0	0	0	0	0
□	B1WOF23	0	0	-10	0	-10	0
△	B1WOF23	0	0	-20	0	-20	0
◇	B1WOF23	0	0	-30	0	-30	0



k. CH4 versus α
Figure 54. Concluded.

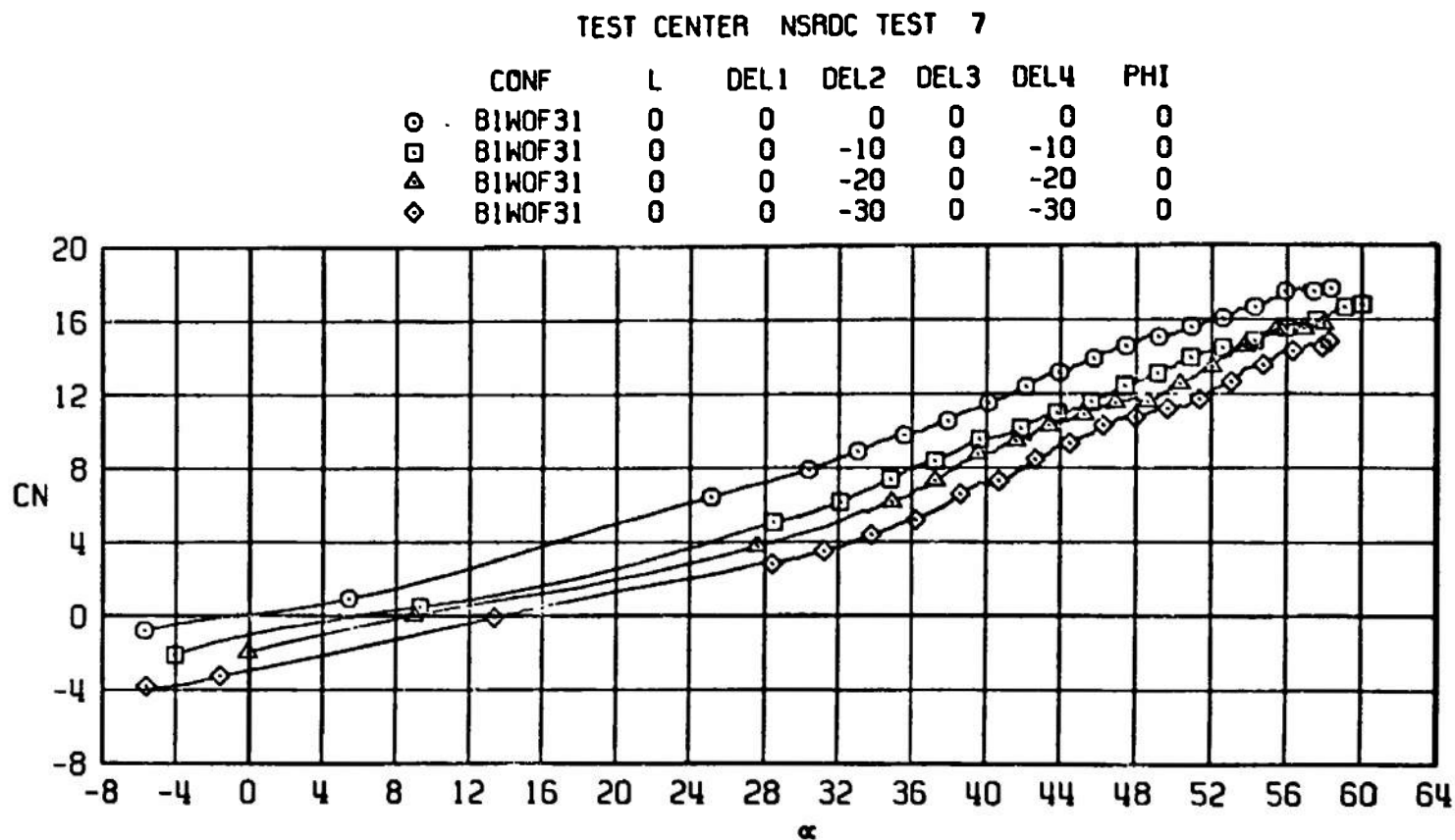
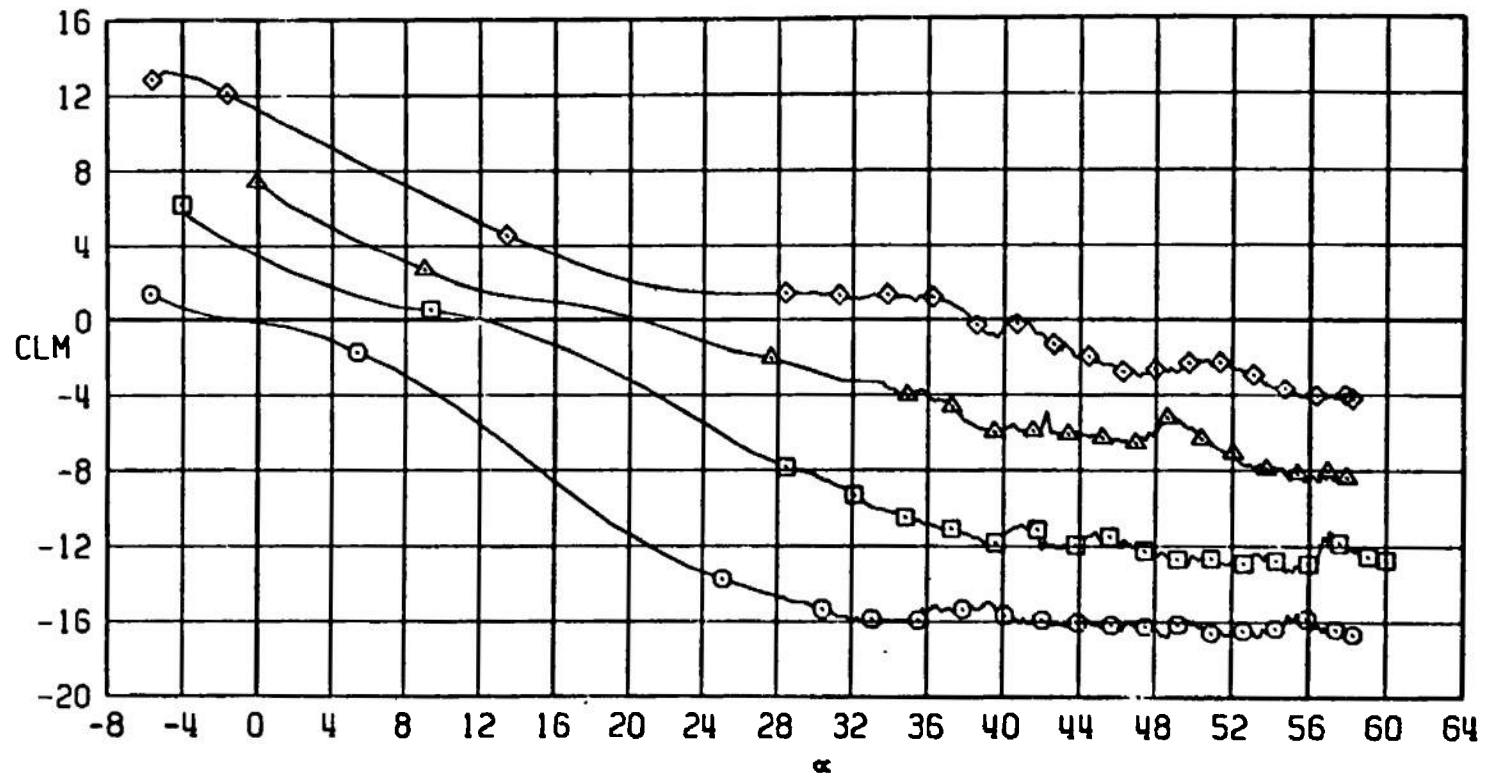


Figure 55. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F31 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.8$.

TEST CENTER NSRDC TEST 7

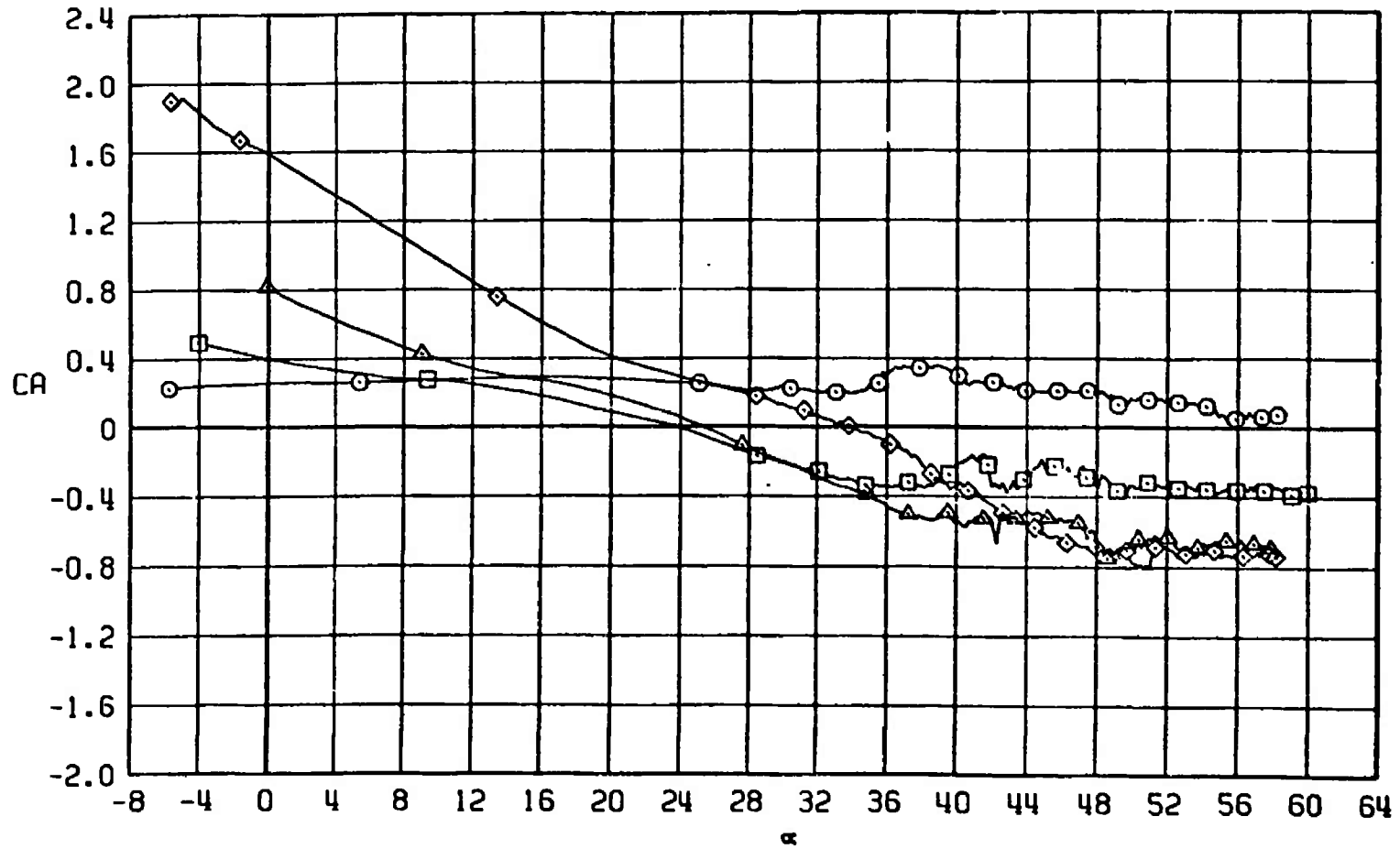
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF31	0	0	0	0	0	0
□	B1WOF31	0	0	-10	0	-10	0
△	B1WOF31	0	0	-20	0	-20	0
◇	B1WOF31	0	0	-30	0	-30	0



b. CLM versus α
Figure 55. Continued.

TEST CENTER NSRDC TEST 7

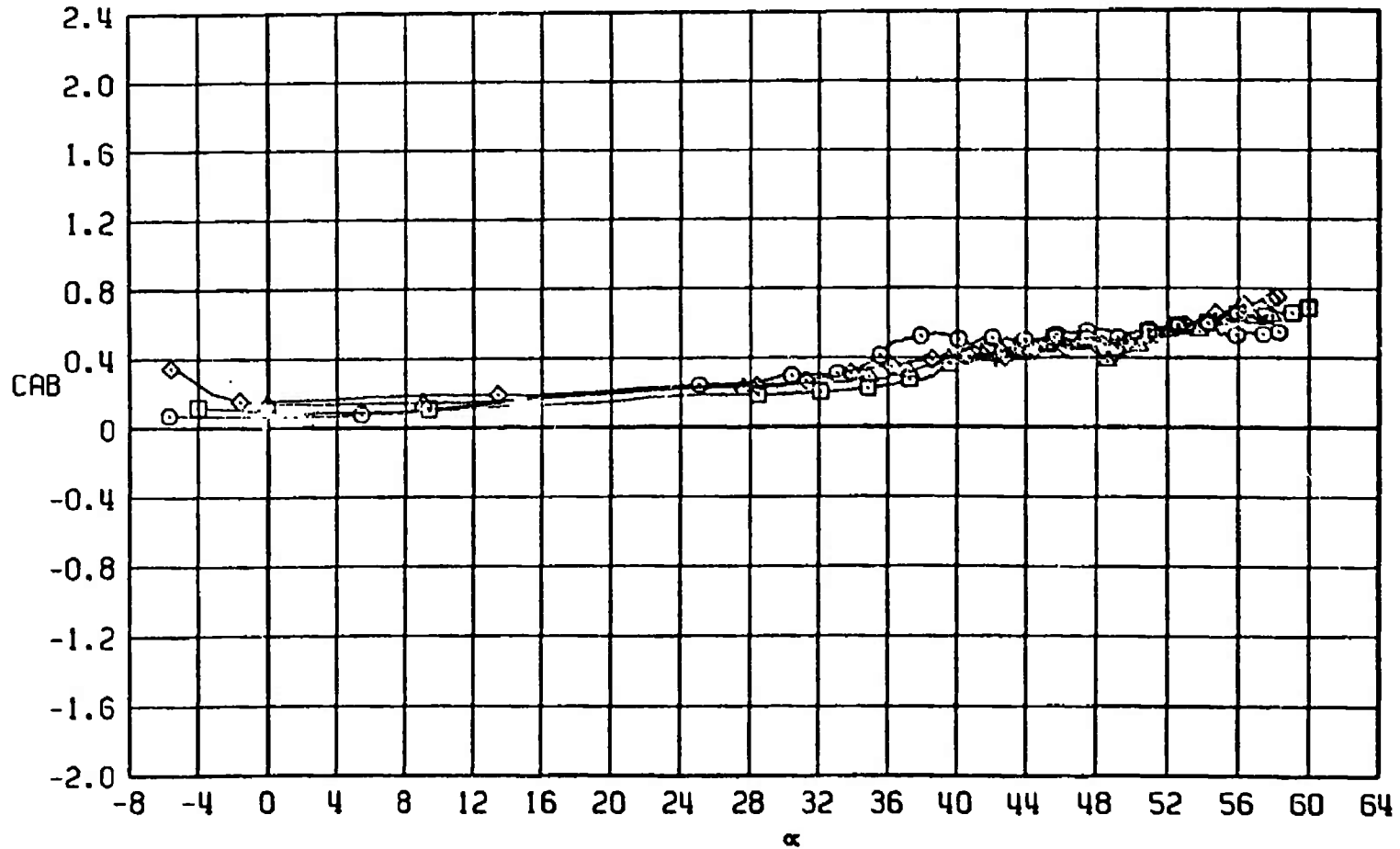
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



c. CA versus α
Figure 55. Continued.

TEST CENTER NSRDC TEST 7

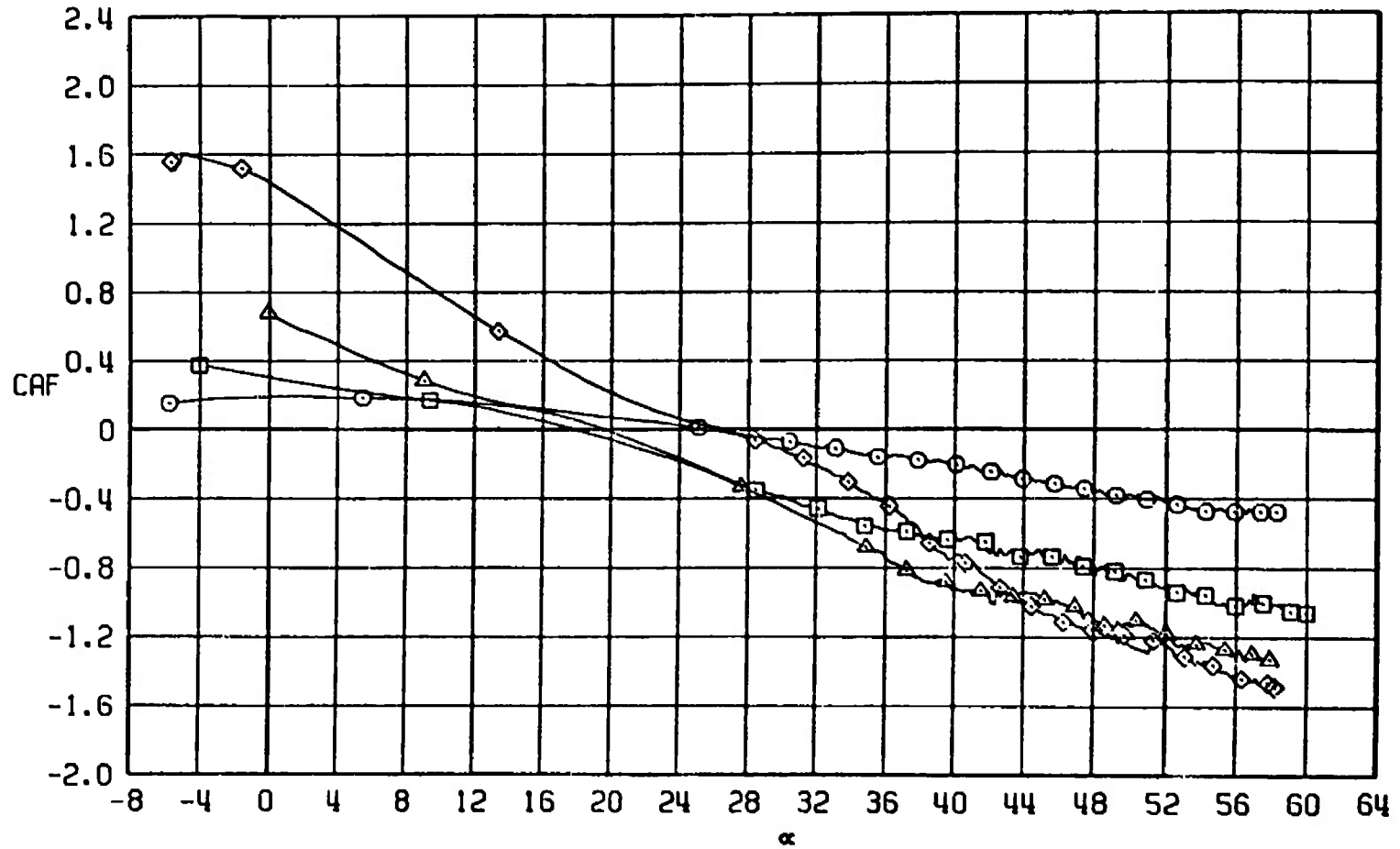
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



d. CAB versus α
Figure 55. Continued.

TEST CENTER NSRDC TEST 7

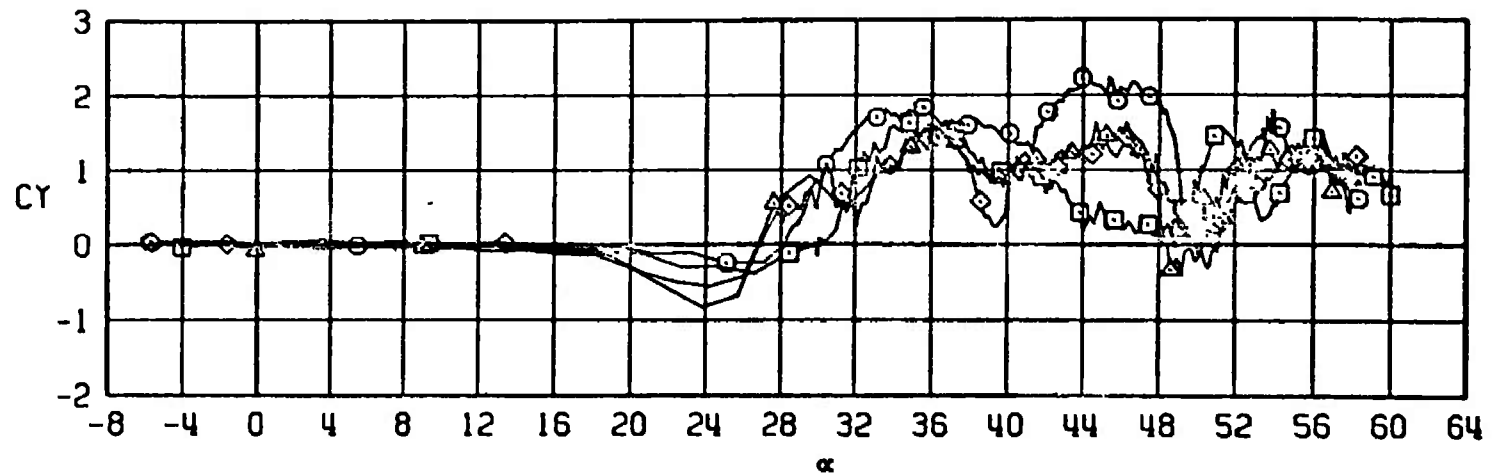
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



e. CAF versus α
Figure 55. Continued.

TEST CENTER NSRDC TEST 7

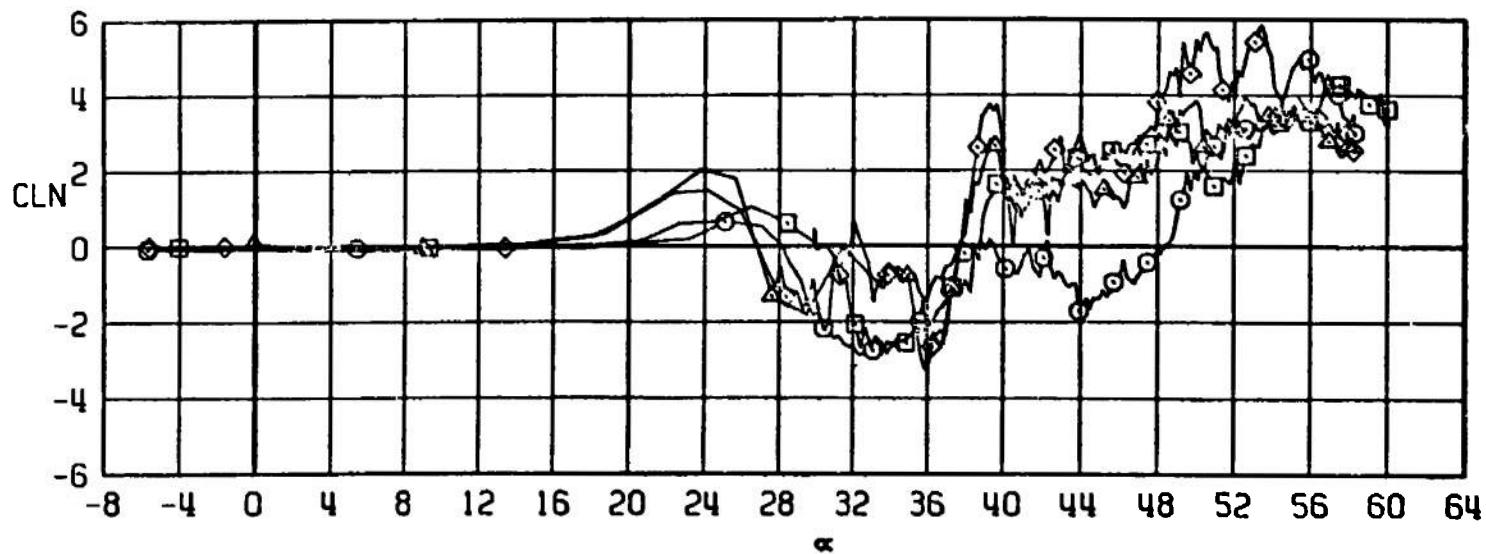
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



f. CY versus α
Figure 55. Continued.

TEST CENTER NSRDC TEST 7

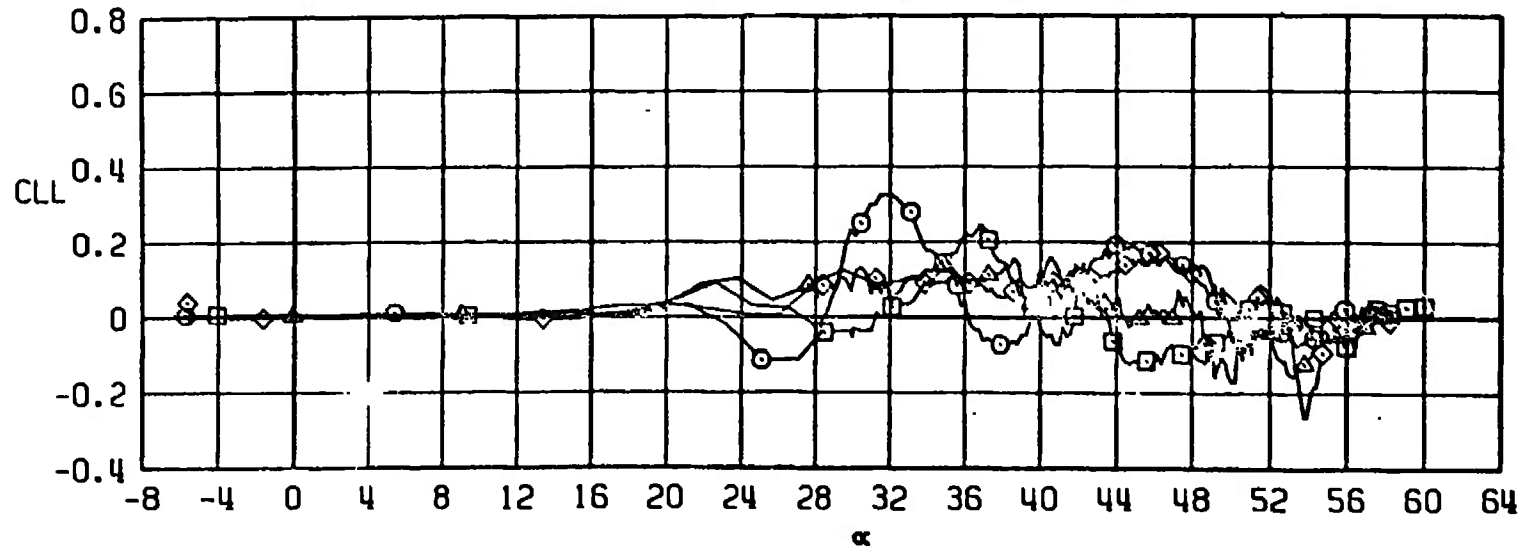
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF31	0	0	0	0	0	0
□	B1WOF31	0	0	-10	0	-10	0
△	B1WOF31	0	0	-20	0	-20	0
◇	B1WOF31	0	0	-30	0	-30	0



g. CLN versus α
Figure 55. Continued.

TEST CENTER NSRDC TEST 7

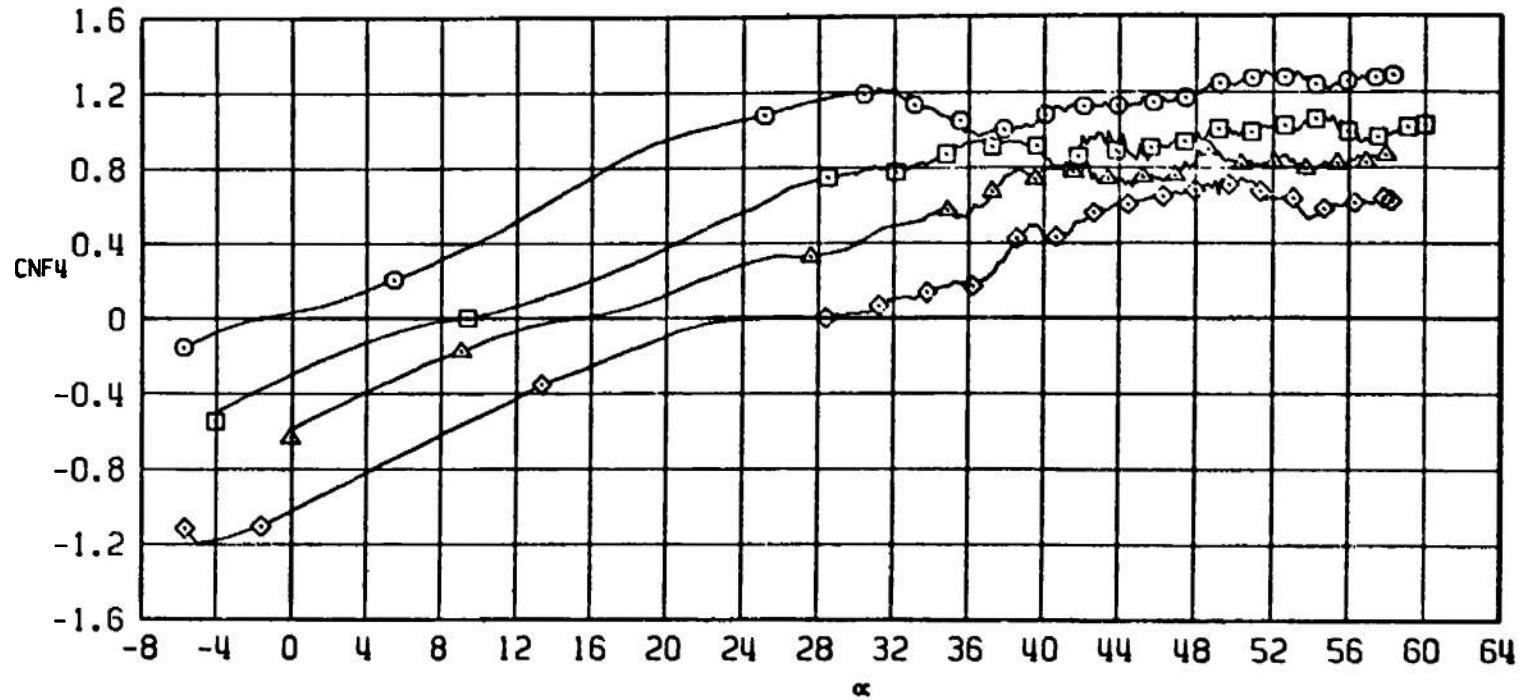
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



h. CLL versus α
Figure 55. Continued.

TEST CENTER NSRDC TEST 7

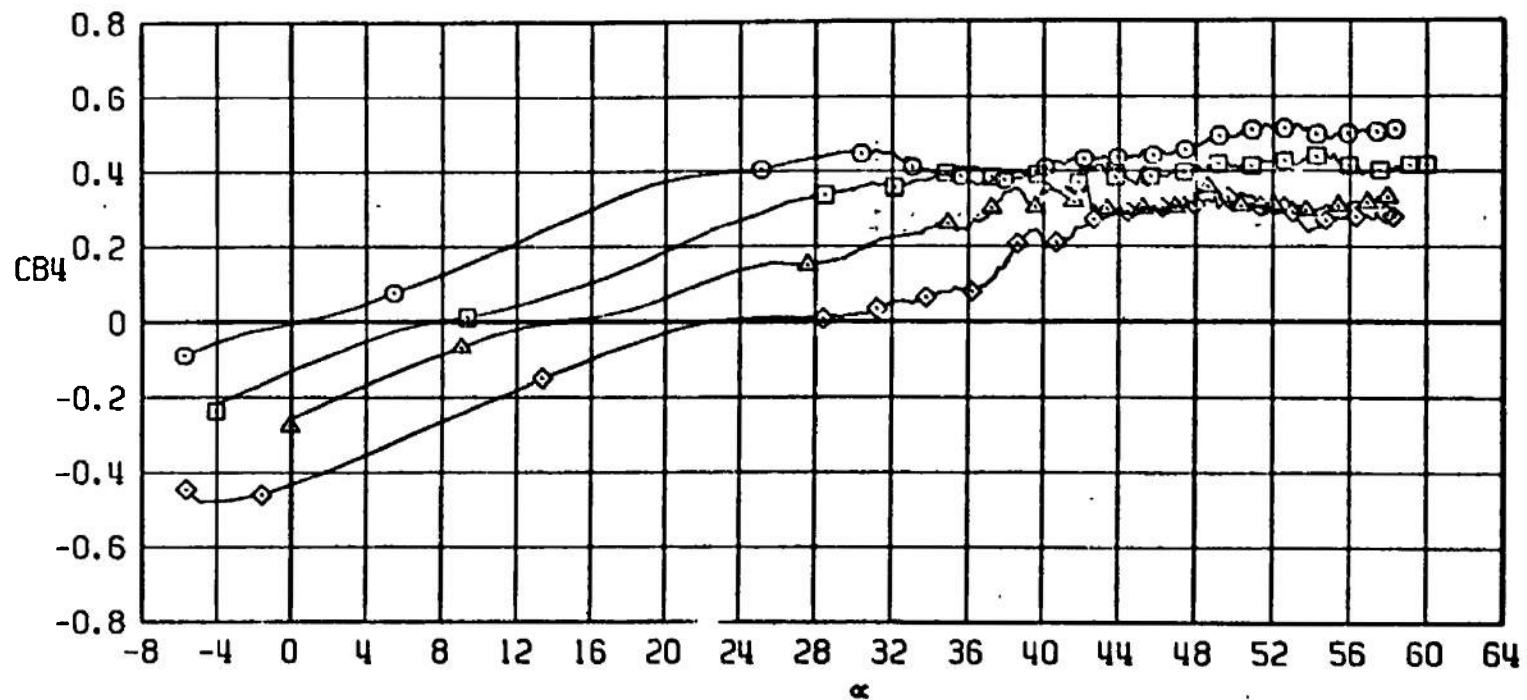
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF31	0	0	0	0	0	0
□	B1WOF31	0	0	-10	0	-10	0
△	B1WOF31	0	0	-20	0	-20	0
◇	B1WOF31	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 55. Continued.

TEST CENTER NSRDC TEST 7

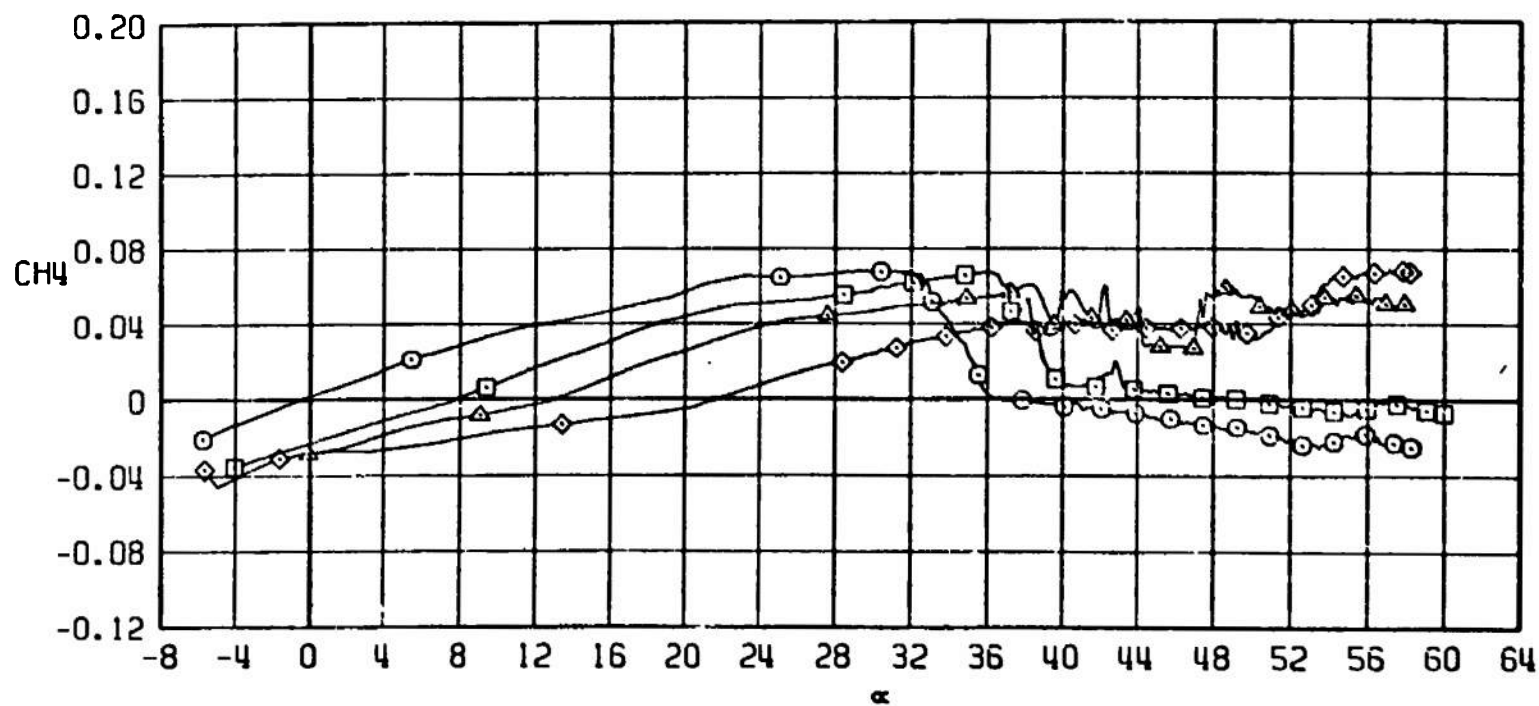
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF31	0	0	0	0	0	0
□	B1WOF31	0	0	-10	0	-10	0
△	B1WOF31	0	0	-20	0	-20	0
◇	B1WOF31	0	0	-30	0	-30	0



j. CB4 versus α
Figure 55. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 55. Concluded.

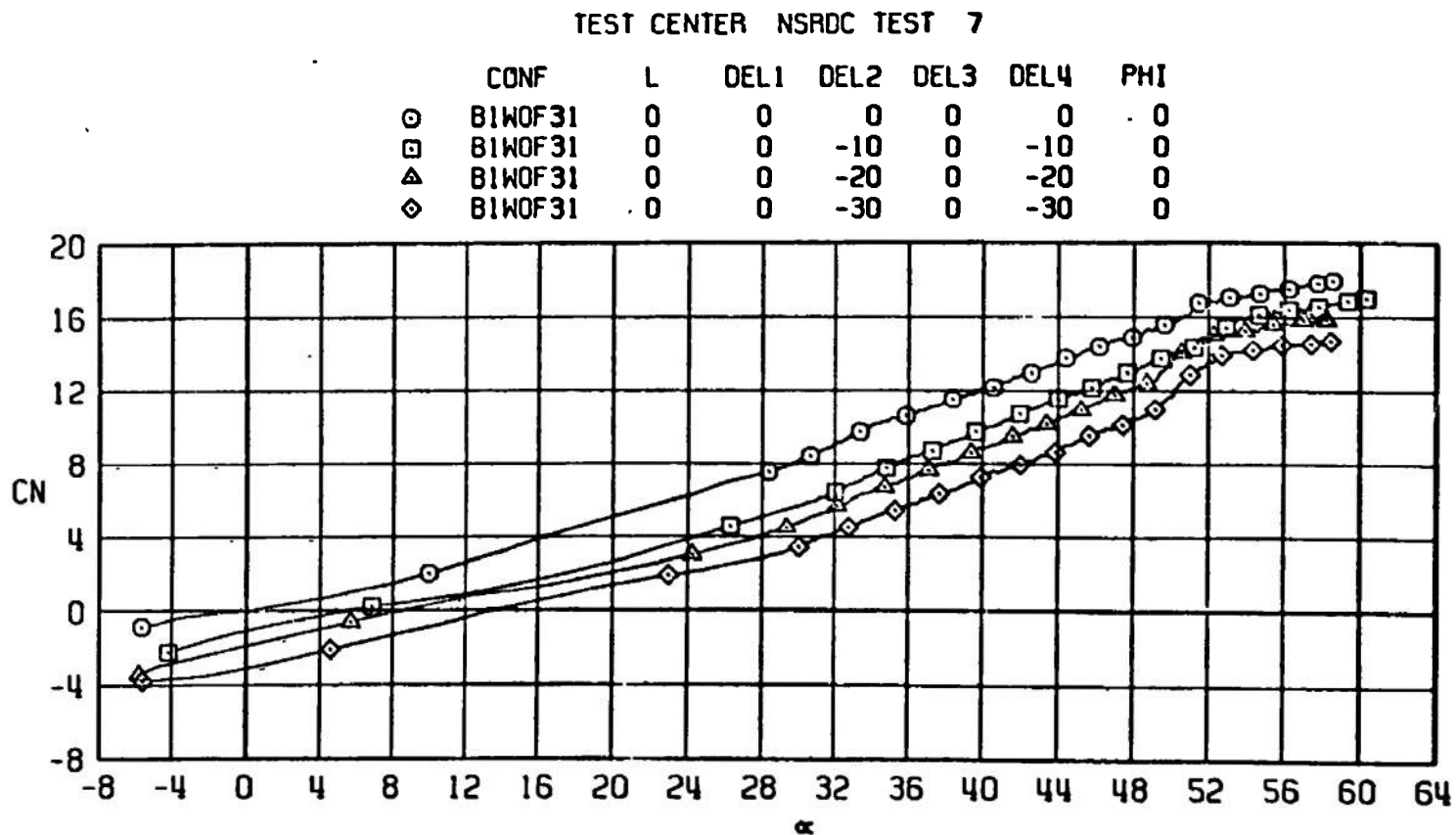
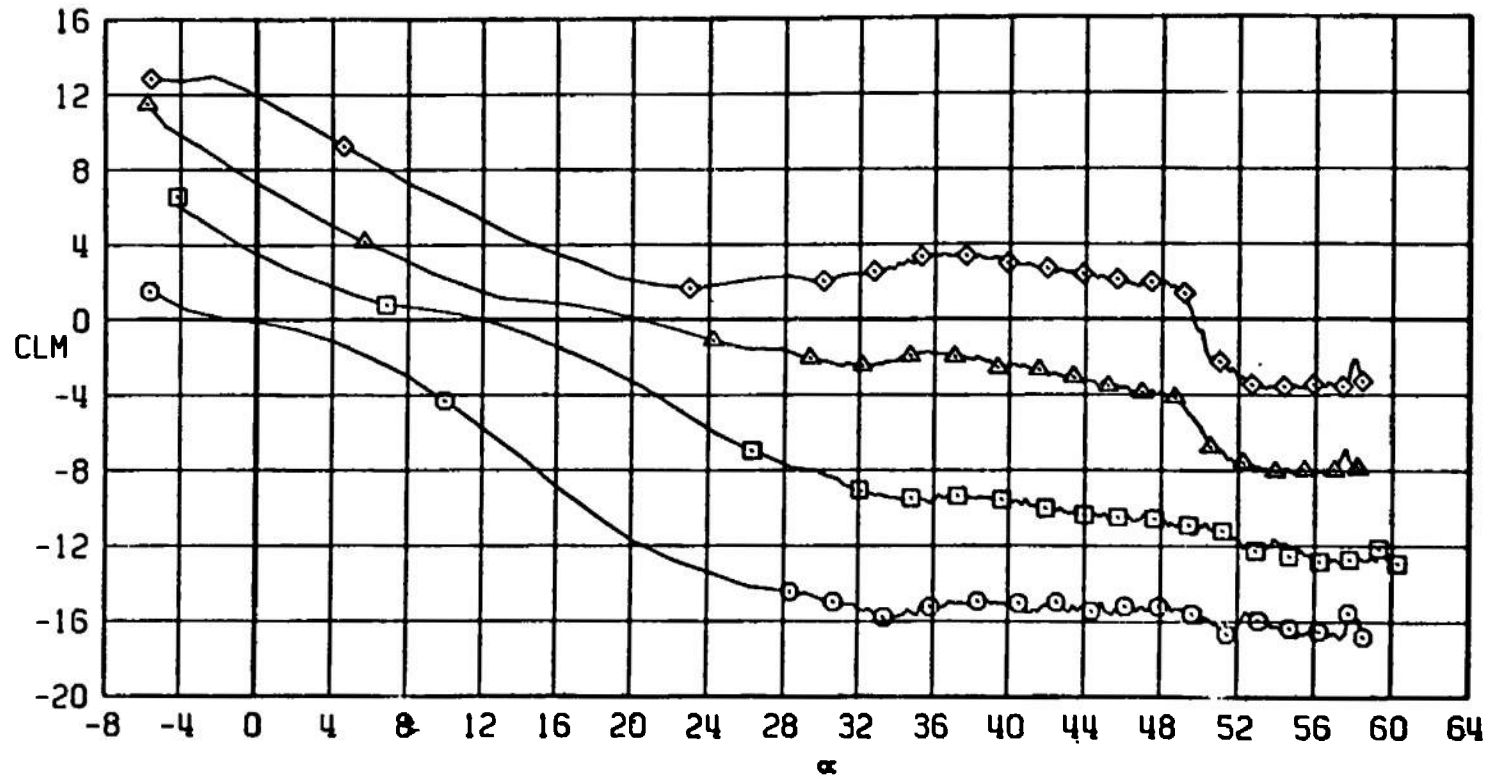


Figure 56. Test No. 7, comparison of aerodynamic coefficients of configuration B1WOF31 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.9$.

TEST CENTER NSRDC TEST 7

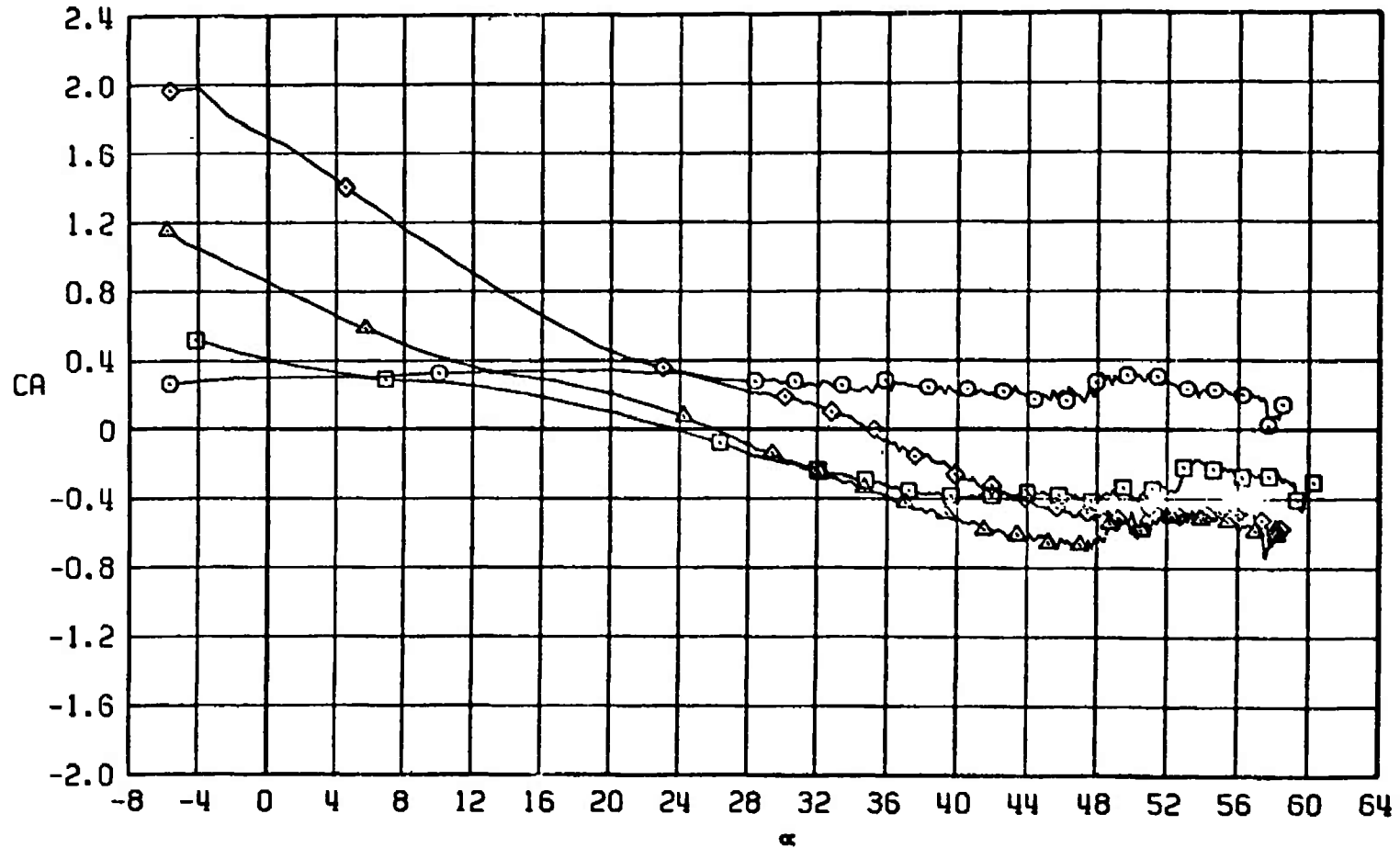
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



b. CLM versus α
Figure 56. Continued.

TEST CENTER NSRDC TEST 7

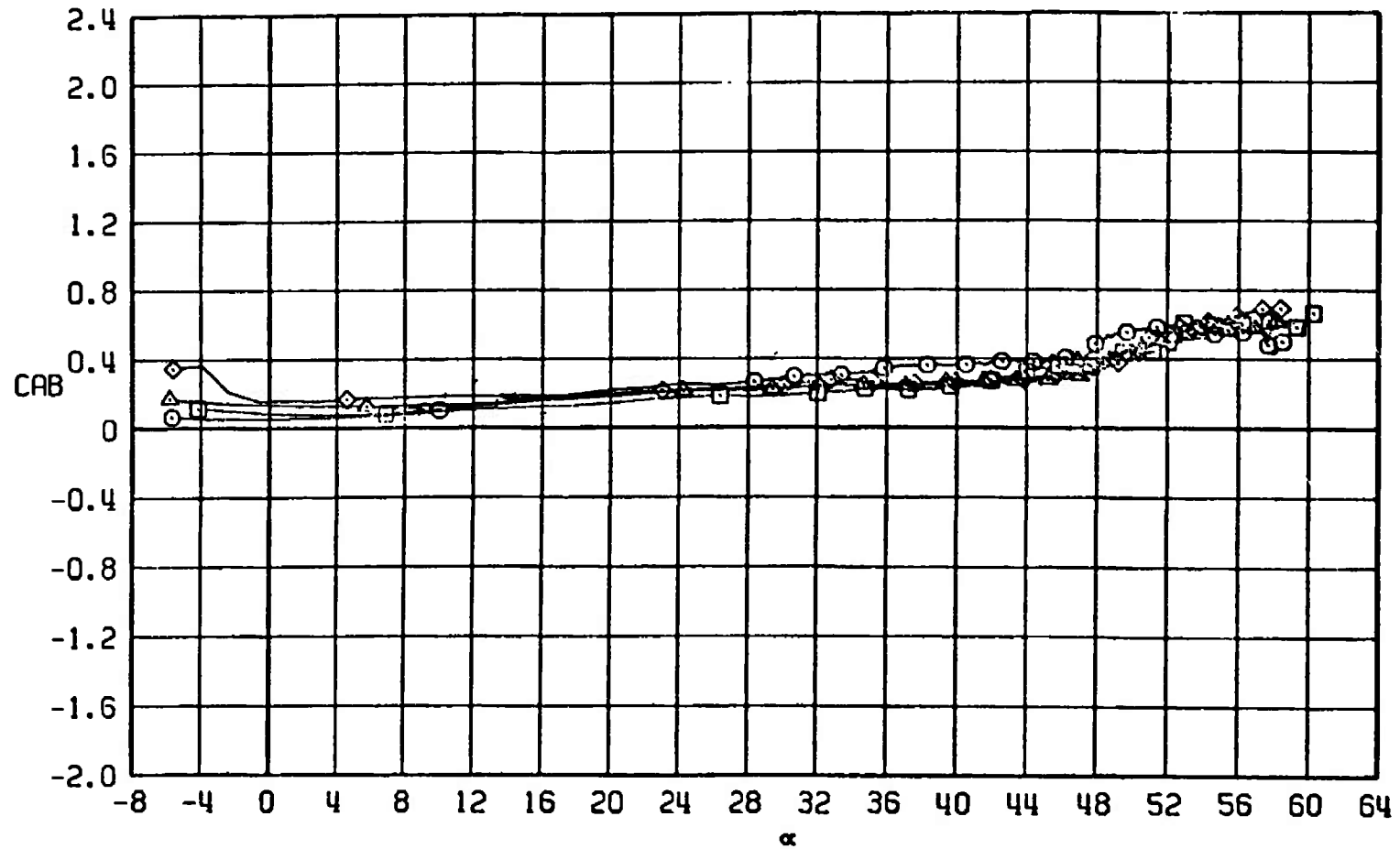
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



c. CA versus α
Figure 56. Continued.

TEST CENTER NSRDC TEST 7

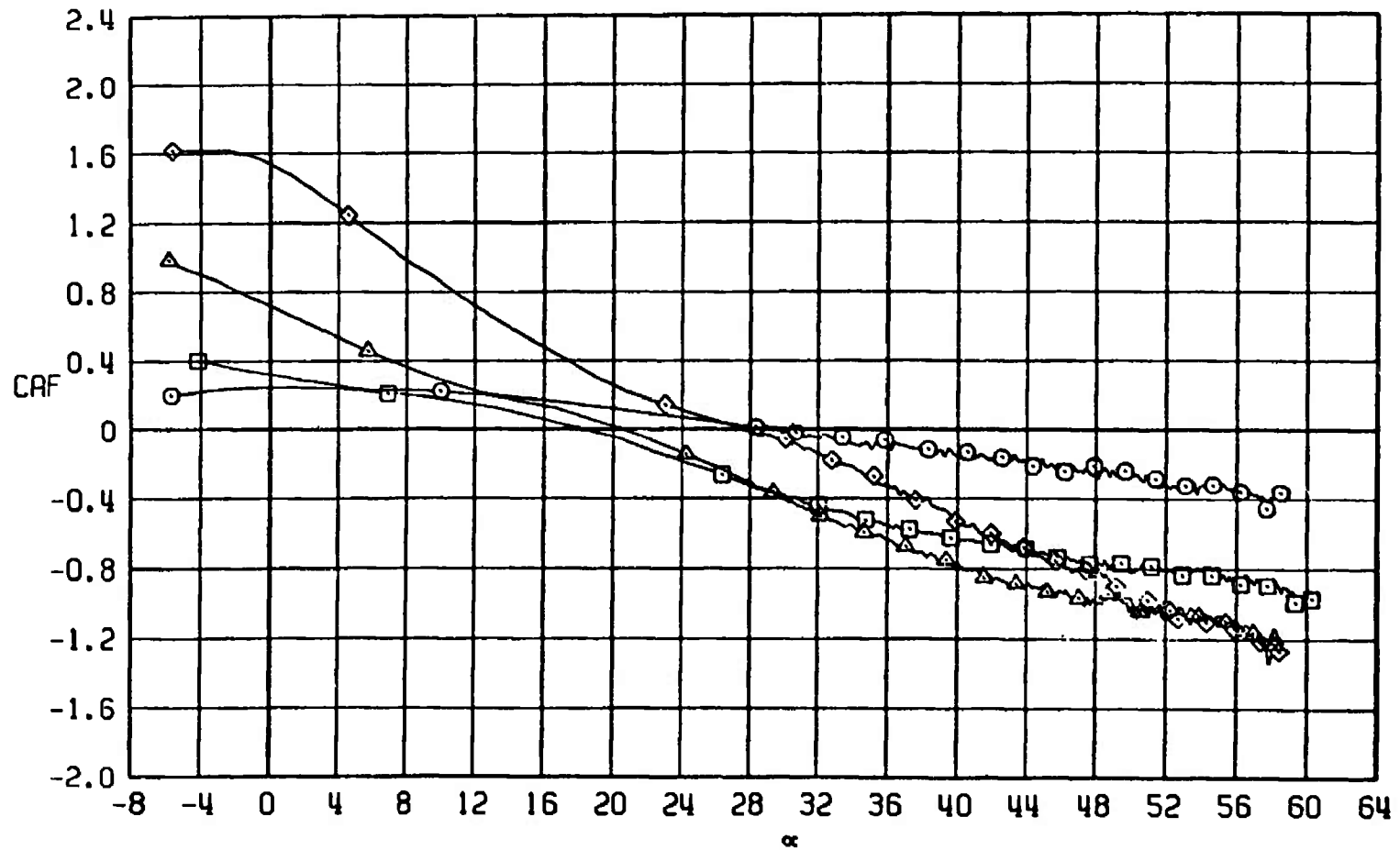
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



d. CAB versus α
Figure 56. Continued.

TEST CENTER NSRDC TEST 7

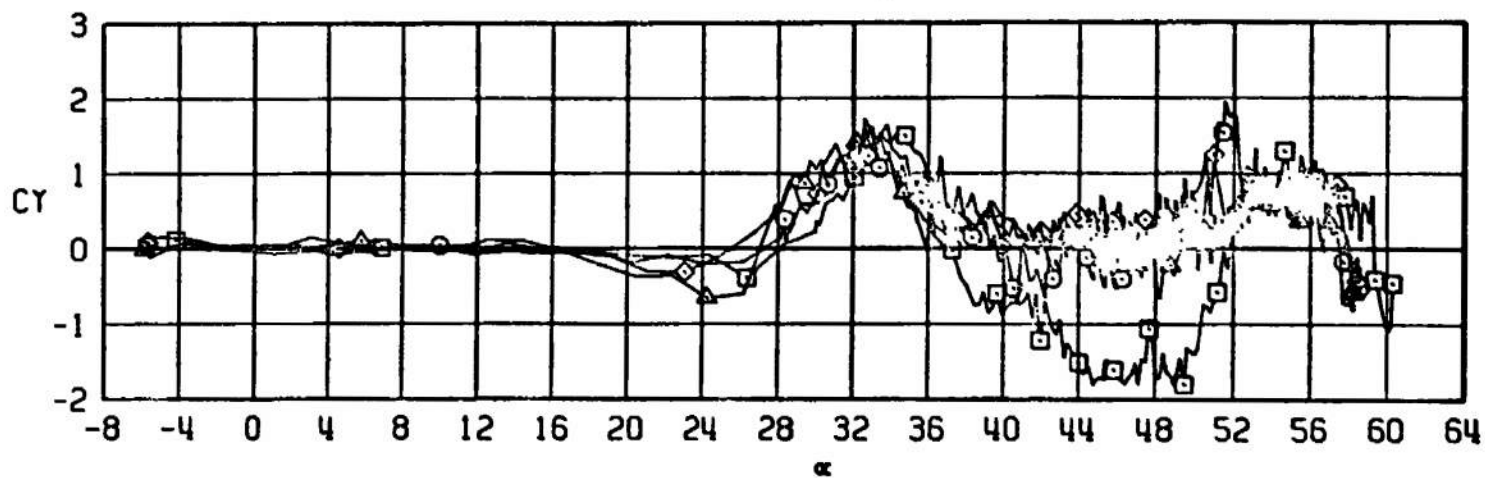
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF31	0	0	0	0	0	0
□	B1WOF31	0	0	-10	0	-10	0
△	B1WOF31	0	0	-20	0	-20	0
◇	B1WOF31	0	0	-30	0	-30	0



e. CAF versus α
Figure 56. Continued.

TEST CENTER NSRDC TEST 7

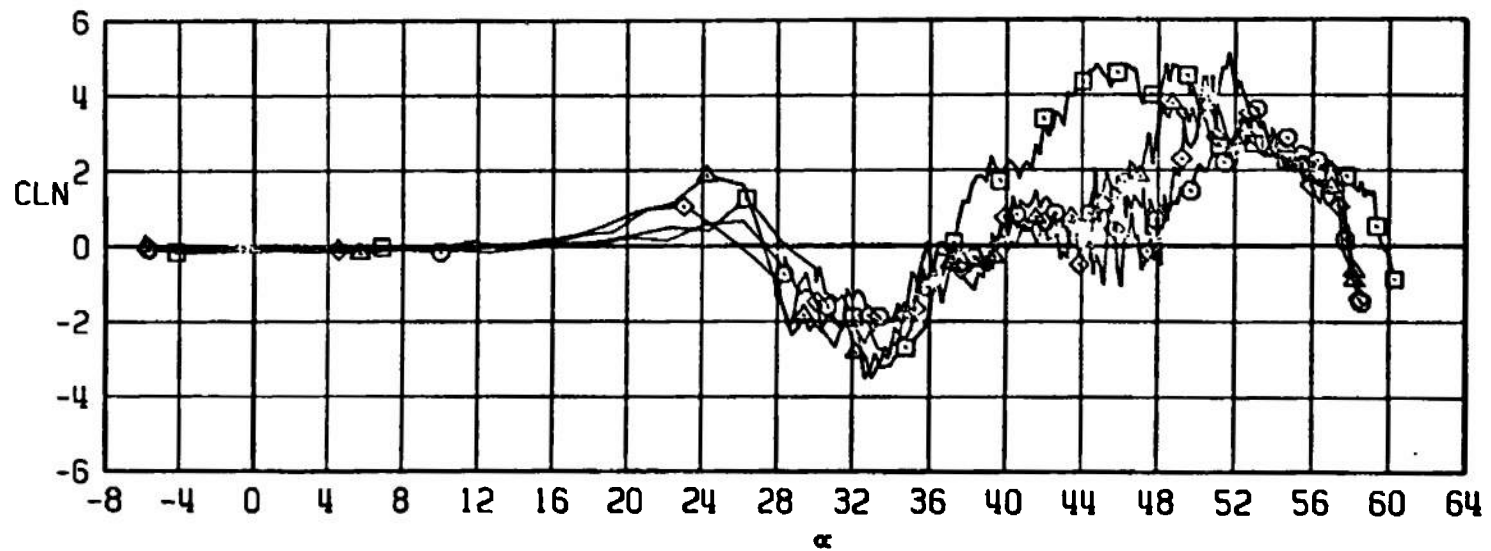
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	81WOF31	0	0	0	0	0	0
⊠	81WOF31	0	0	-10	0	-10	0
△	81WOF31	0	0	-20	0	-20	0
◇	81WOF31	0	0	-30	0	-30	0



f. CY versus α
Figure 56. Continued.

TEST CENTER NSRDC TEST 7

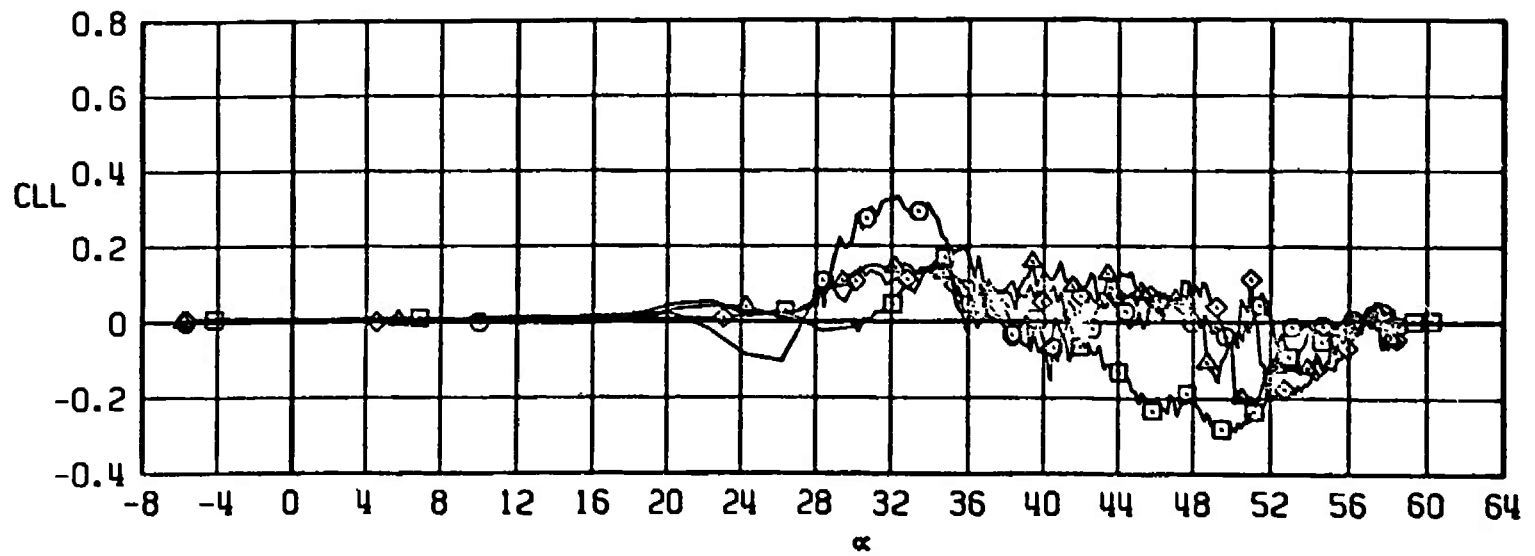
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF31	0	0	0	0	0	0
□	81WOF31	0	0	-10	0	-10	0
△	81WOF31	0	0	-20	0	-20	0
◇	81WOF31	0	0	-30	0	-30	0



g. CLN versus α
Figure 56. Continued.

TEST CENTER NSRDC TEST 7

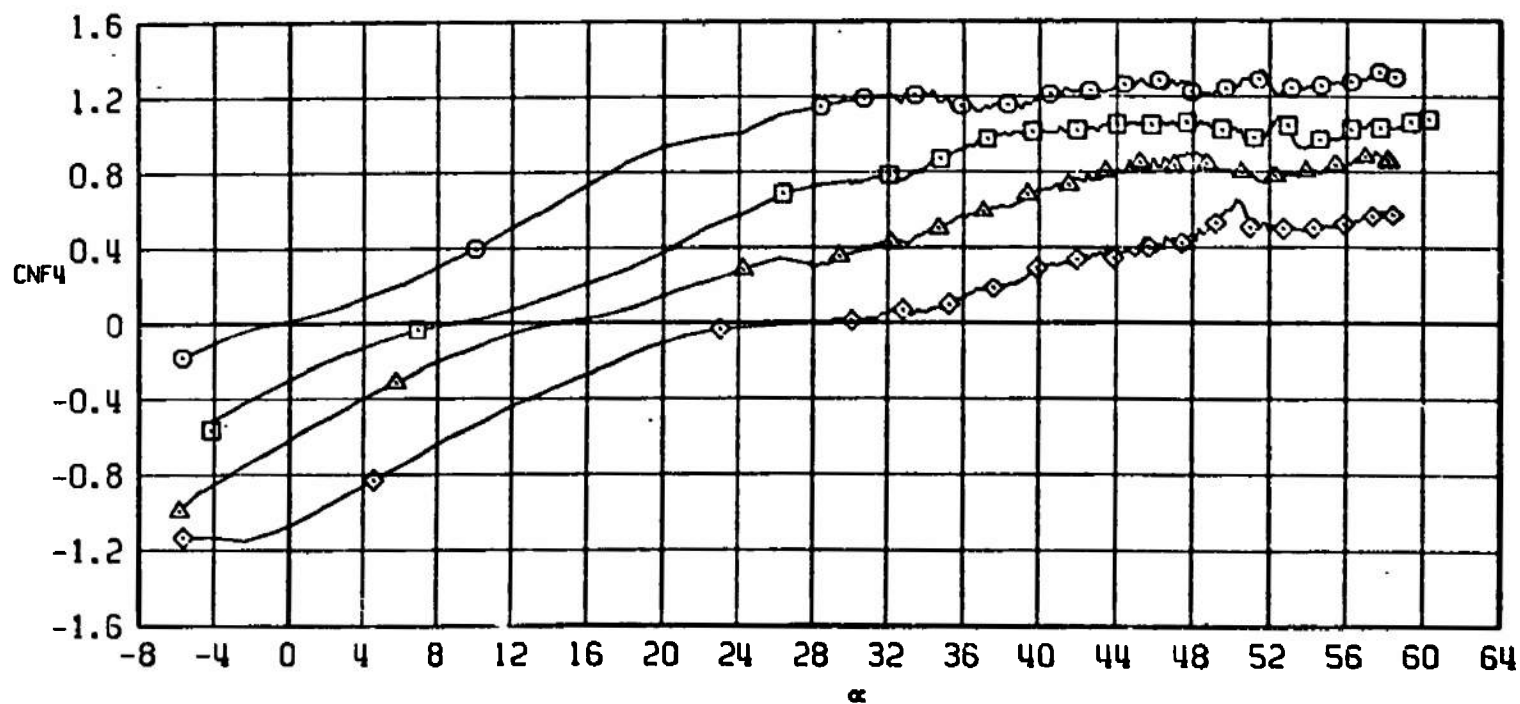
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



h. CLL versus α
Figure 56. Continued.

TEST CENTER NSRDC TEST 7

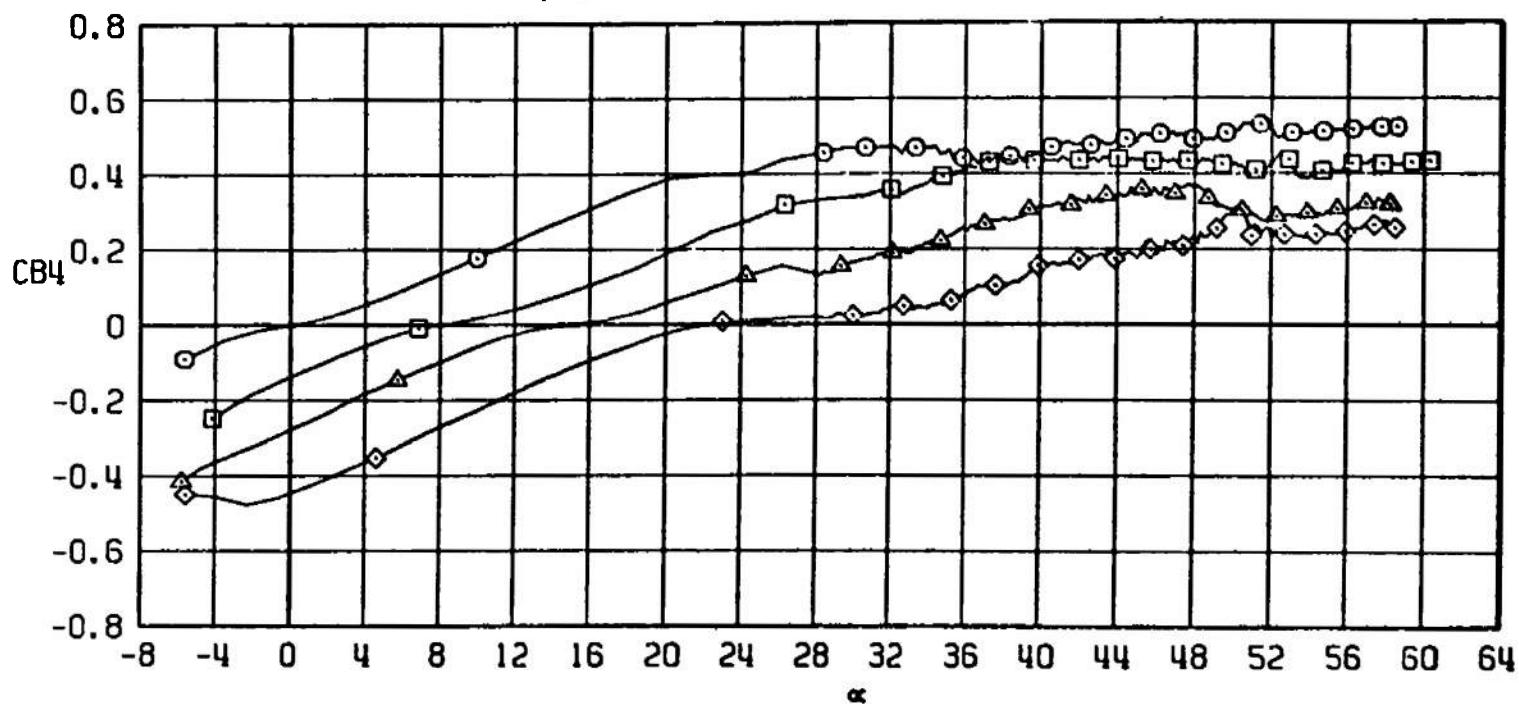
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 56. Continued.

TEST CENTER NSRDC TEST 7

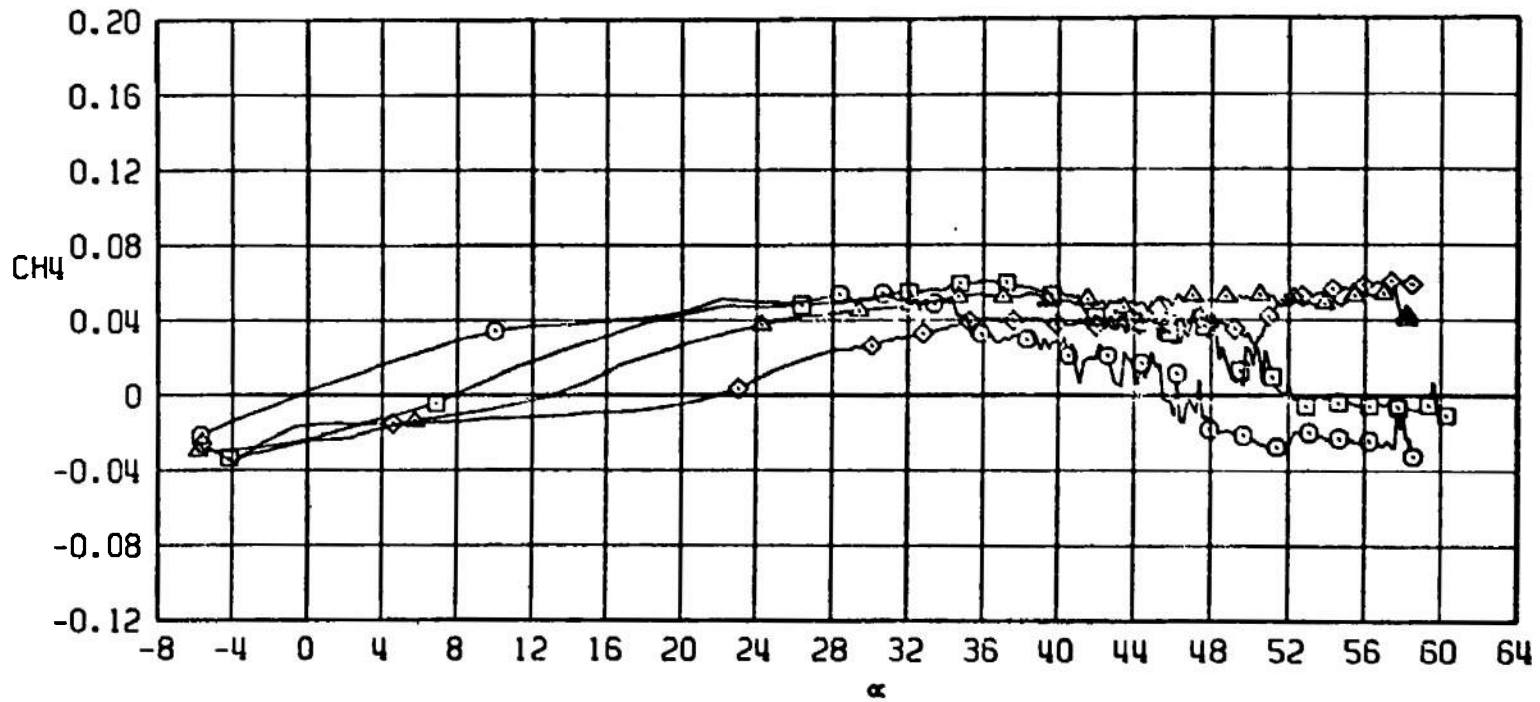
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



j. CB_4 versus α
Figure 56. Continued.

TEST CENTER NSRDC TEST 7

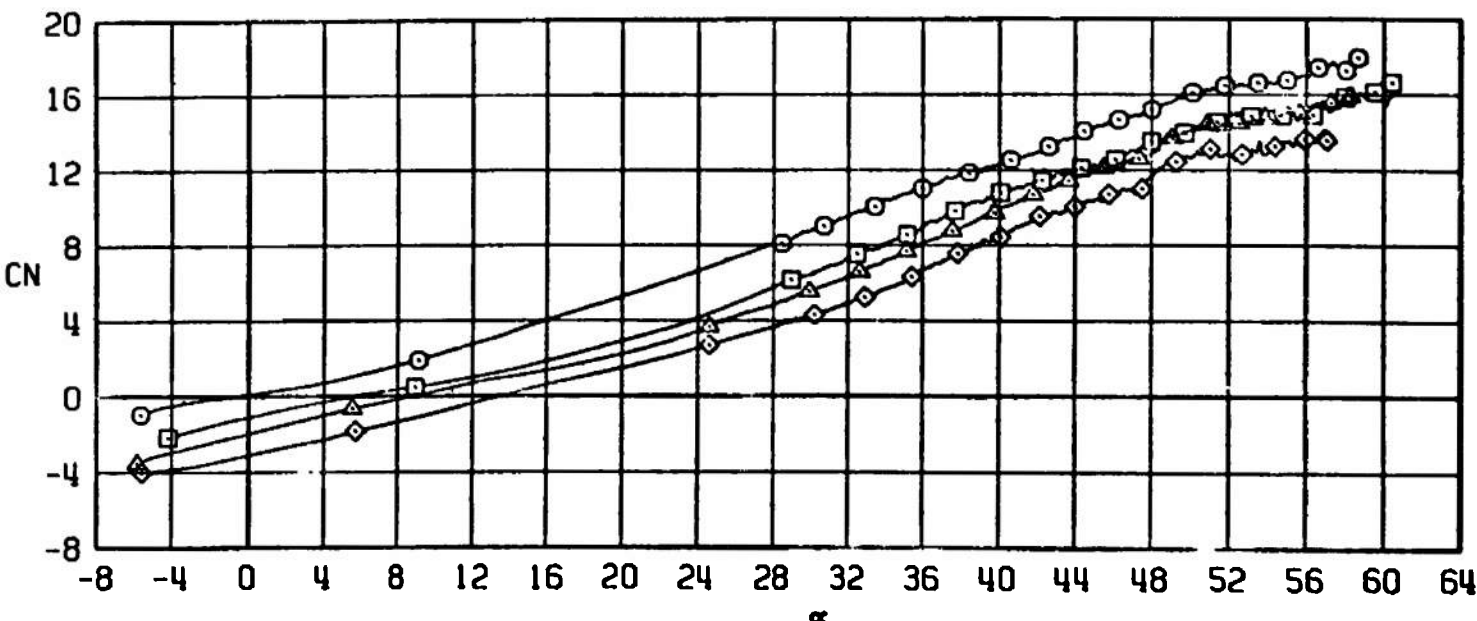
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 56. Concluded.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F31	0	0	0	0	0	0
□	B1W0F31	0	0	-10	0	-10	0
△	B1W0F31	0	0	-20	0	-20	0
◇	B1W0F31	0	0	-30	0	-30	0

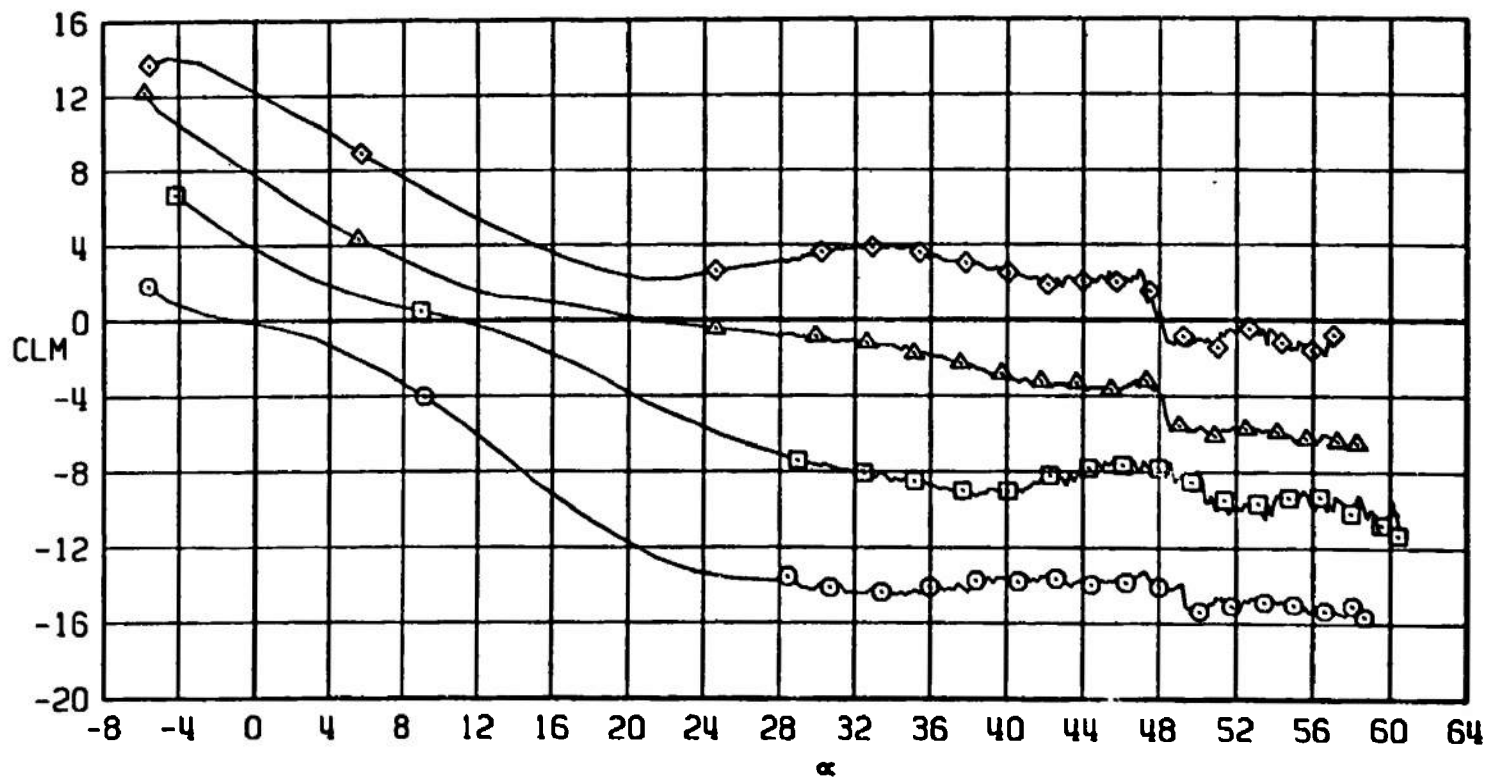


a. CN versus α

Figure 57. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F31 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.0$.

TEST CENTER NSROC TEST 7

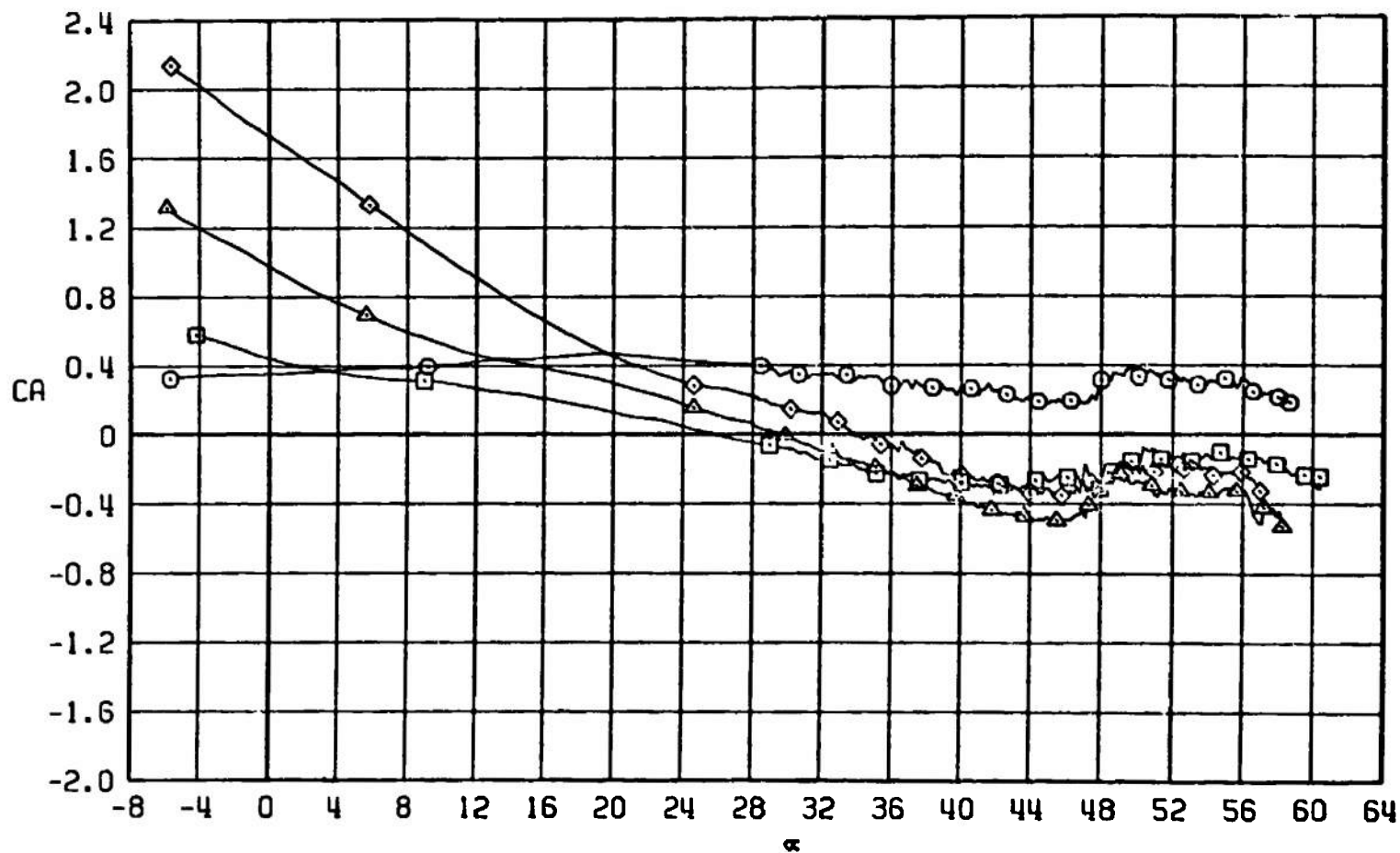
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



b. CLM versus α
Figure 57. Continued.

TEST CENTER NSRDC TEST 7

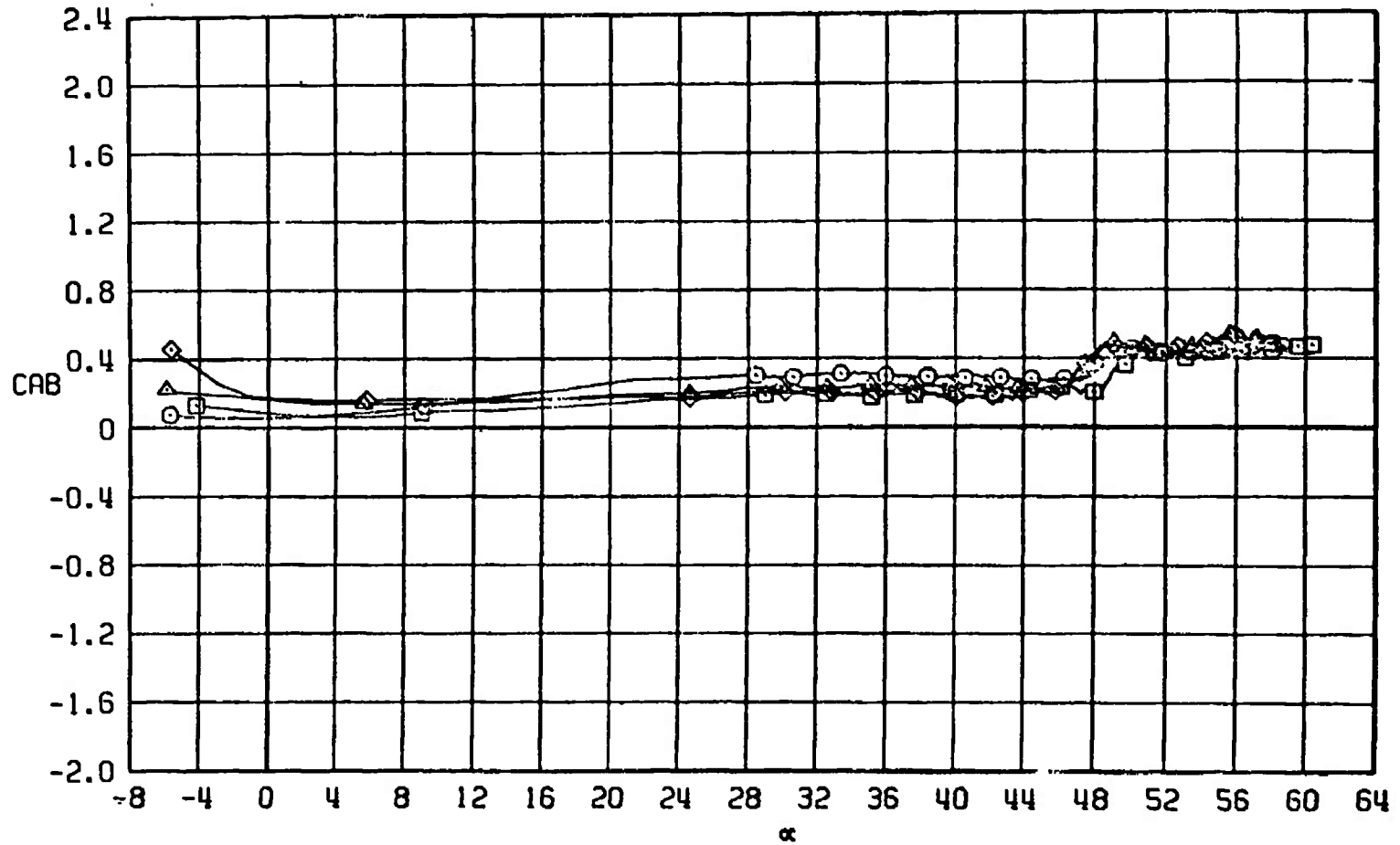
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



c. CA versus α
Figure 57. Continued.

TEST CENTER NSROC TEST 7

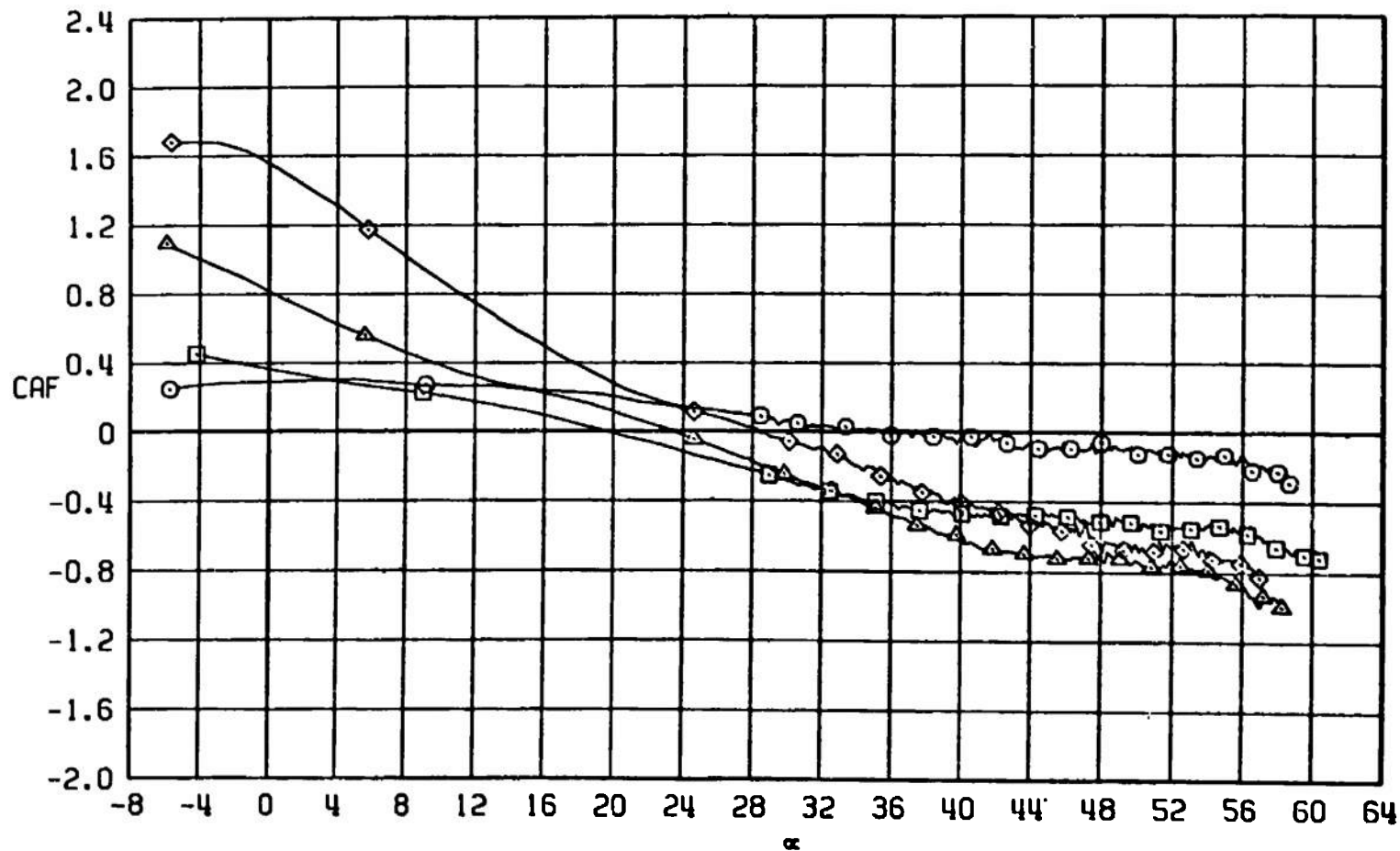
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



d. CAB versus α
Figure 57. Continued.

TEST CENTER NSROC TEST 7

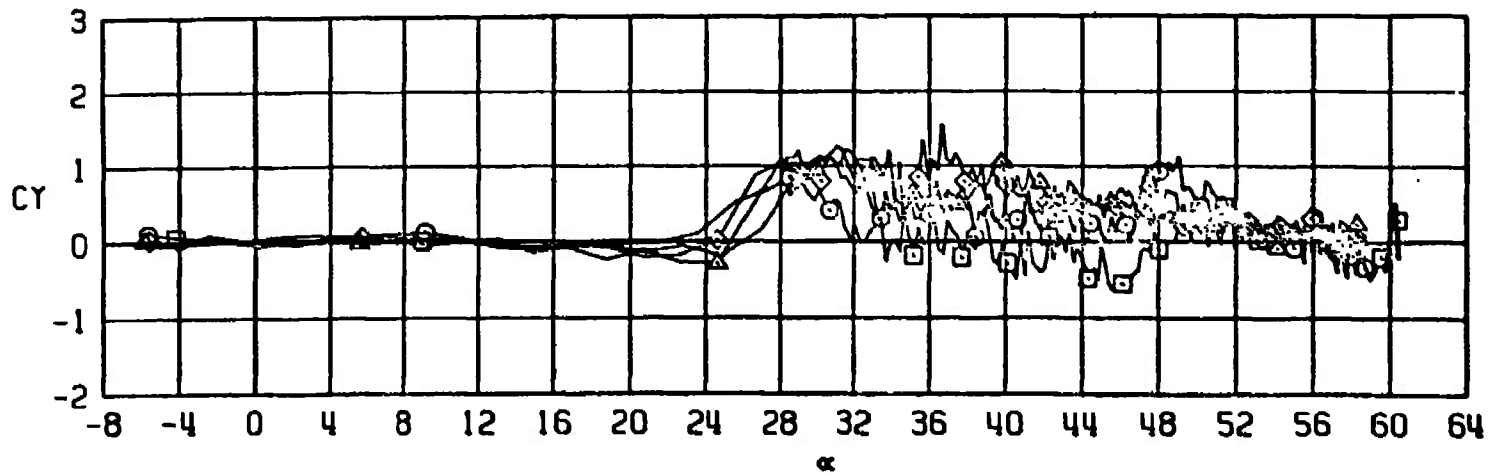
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



e. CAF versus α
Figure 57. Continued.

TEST CENTER NSRDC TEST 7

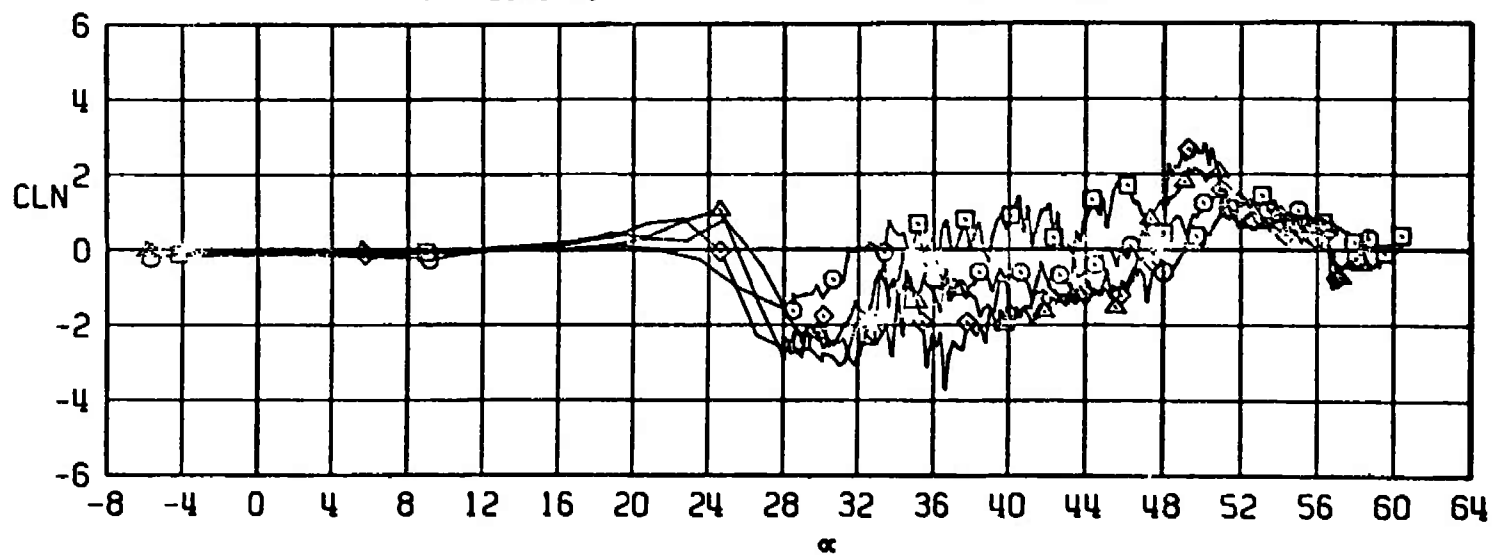
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



f. CY versus α
Figure 57. Continued.

TEST CENTER NSRDC TEST 7

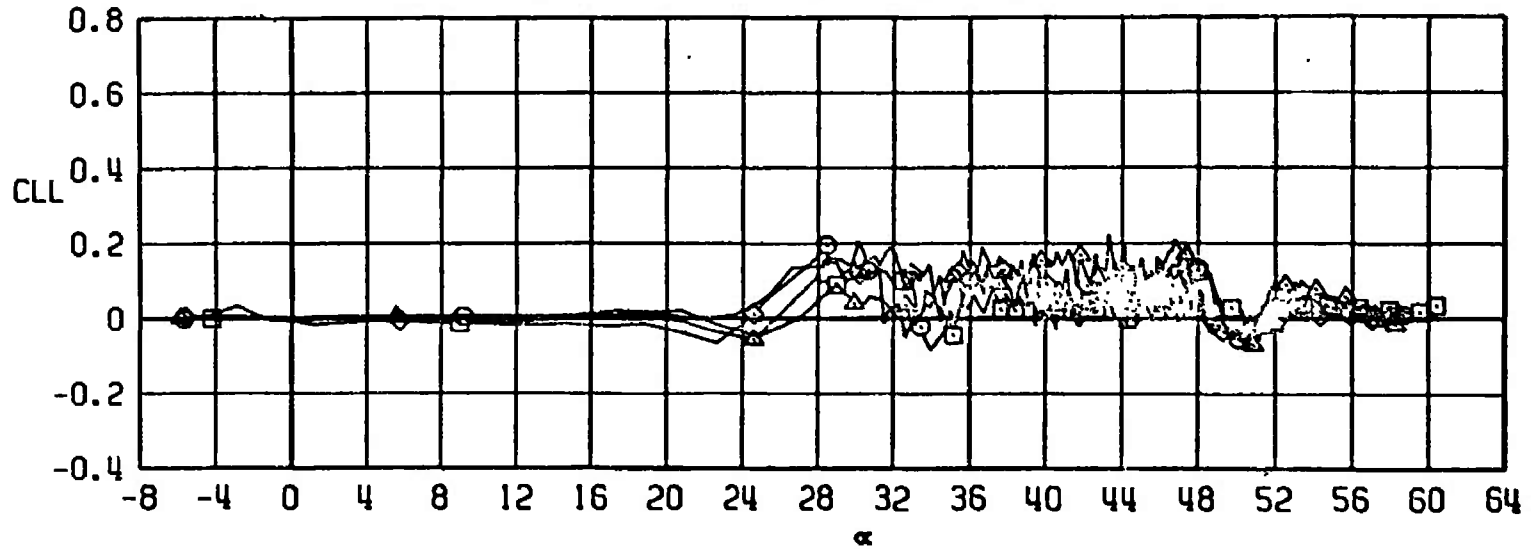
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



g. CLN versus α
Figure 57. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF31	0	0	0	0	0	0
□	B1WOF31	0	0	-10	0	-10	0
△	B1WOF31	0	0	-20	0	-20	0
◇	B1WOF31	0	0	-30	0	-30	0



h. CLL versus α
Figure 57. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0

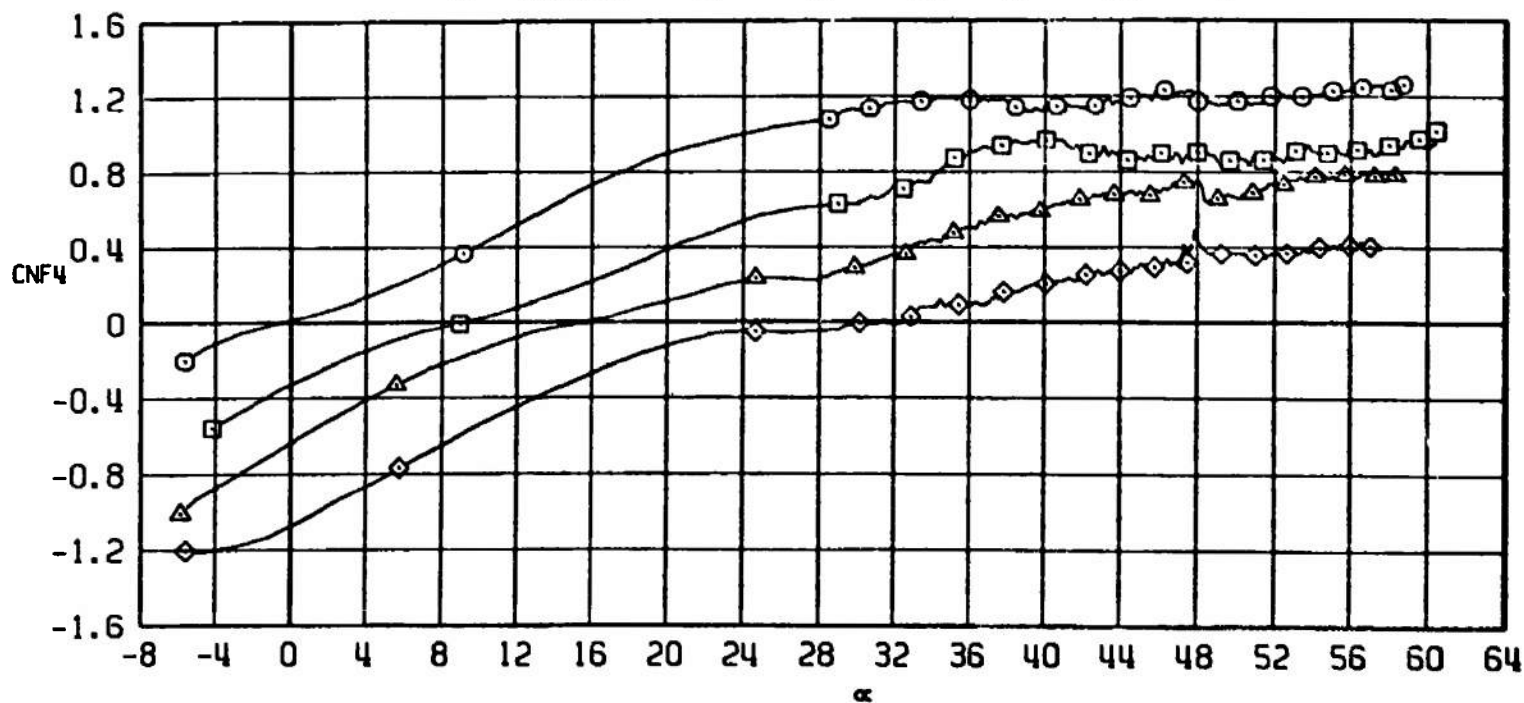
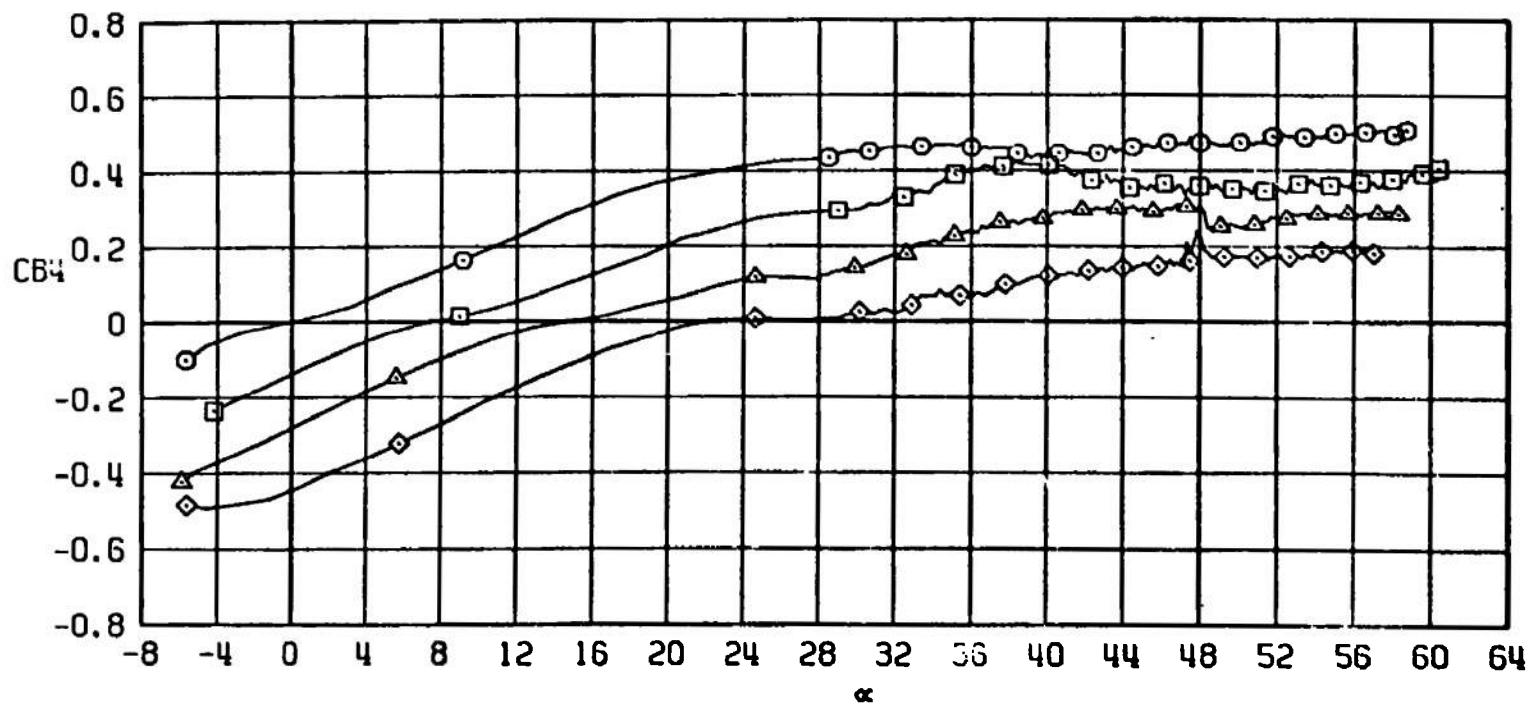
i. CNF4 versus α

Figure 57. Continued.

TEST CENTER NSRDC TEST 7

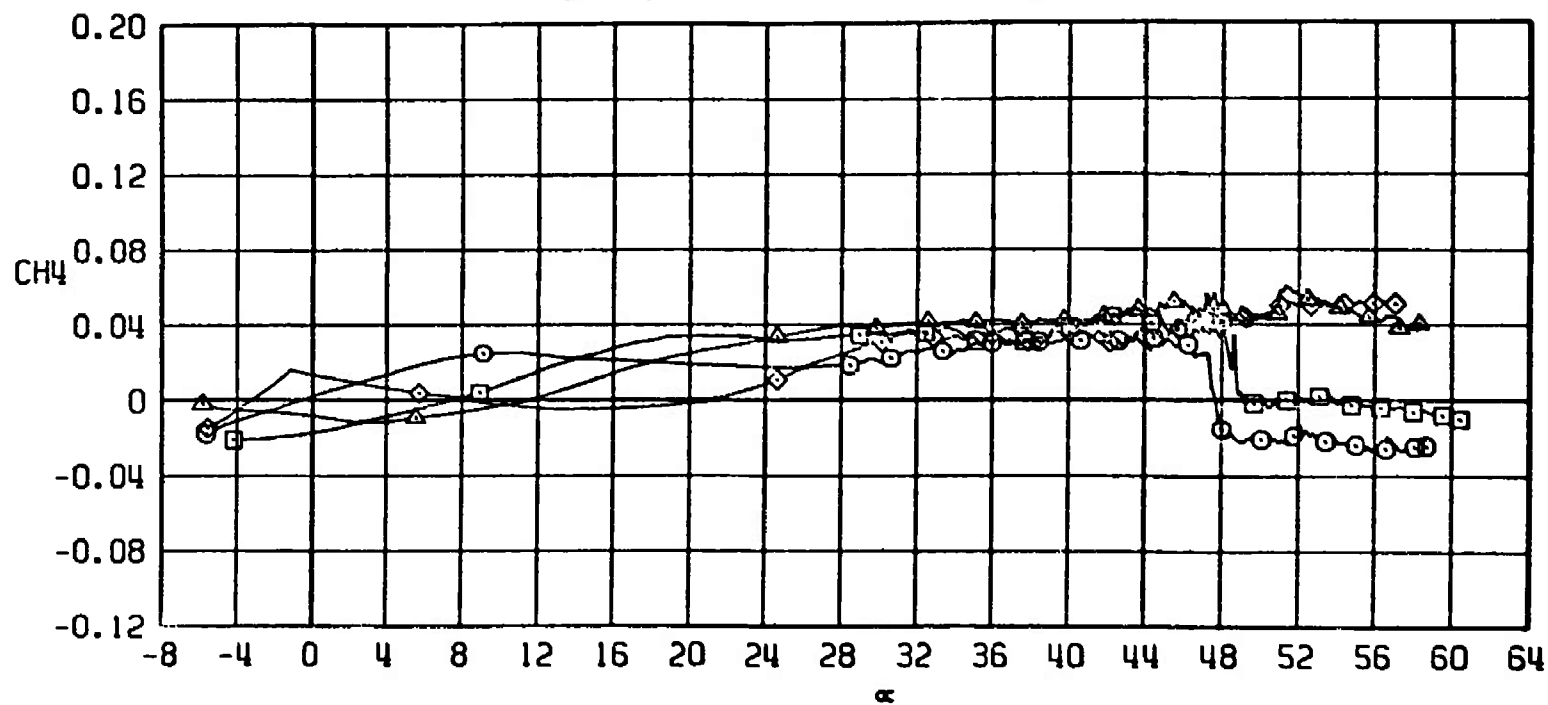
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



j. CB4 versus α
Figure 57. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 57. Concluded.

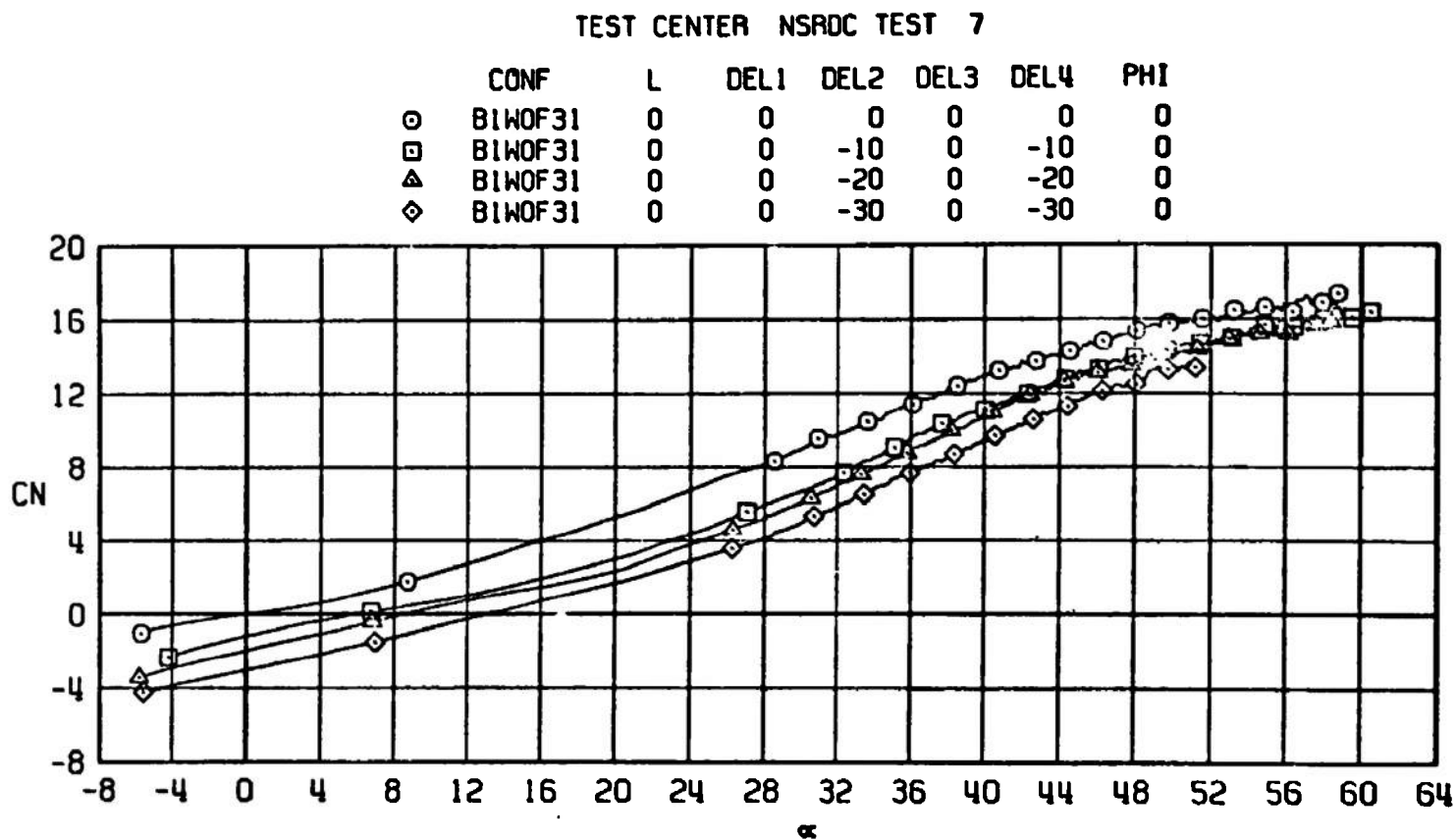
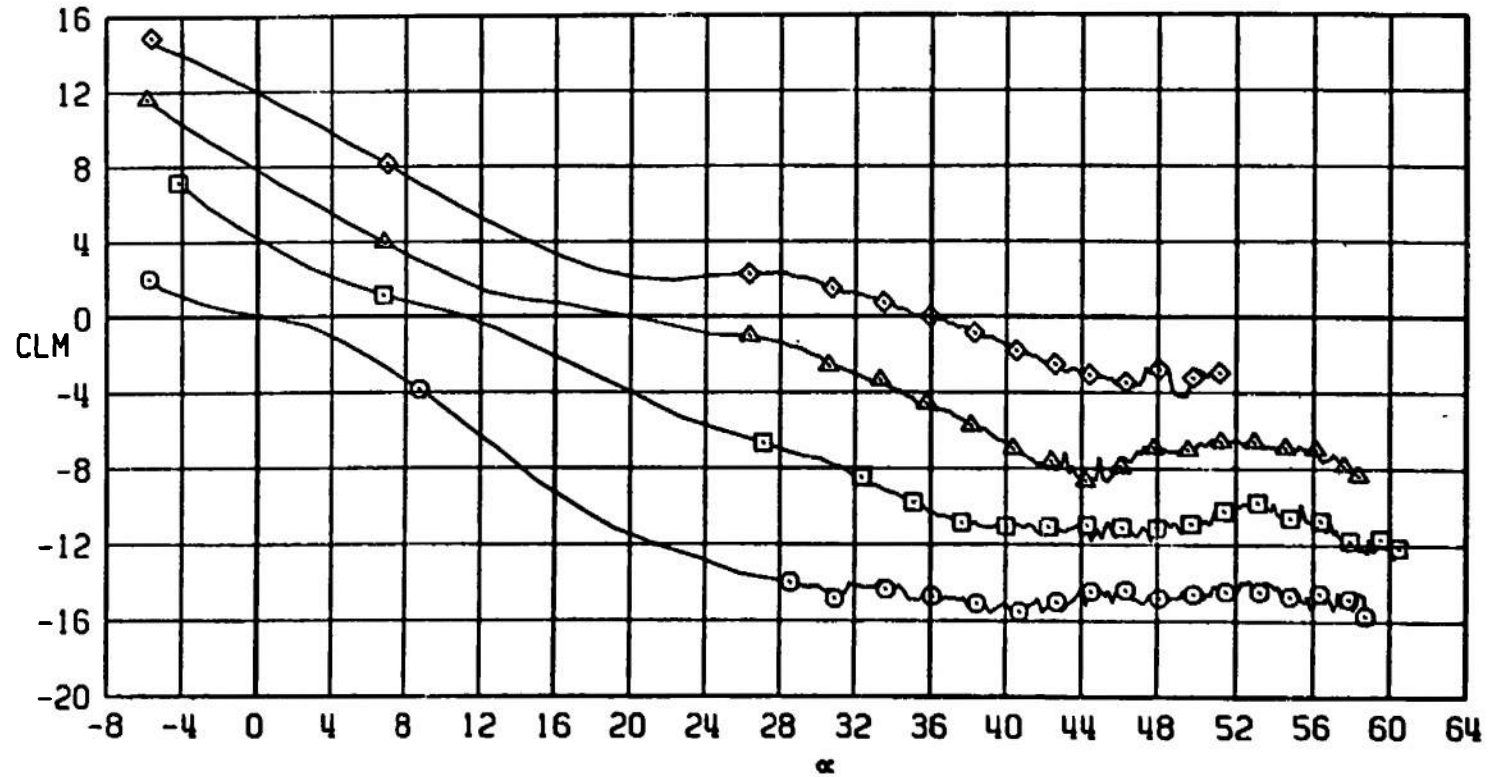


Figure 58. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F31 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.1$.

TEST CENTER NSRDC TEST 7

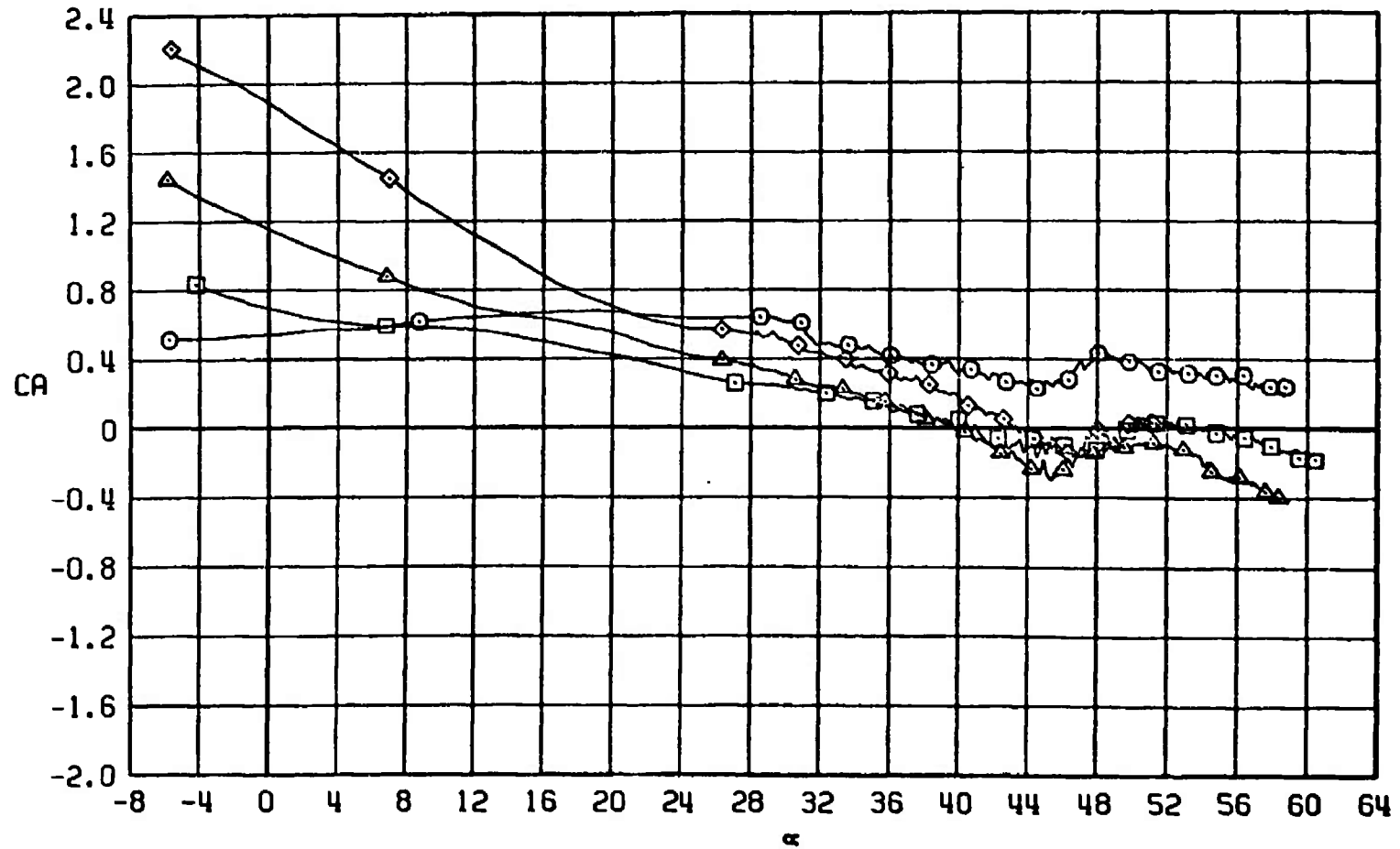
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



b. CLM versus α
Figure 58. Continued.

TEST CENTER NSROC TEST 7

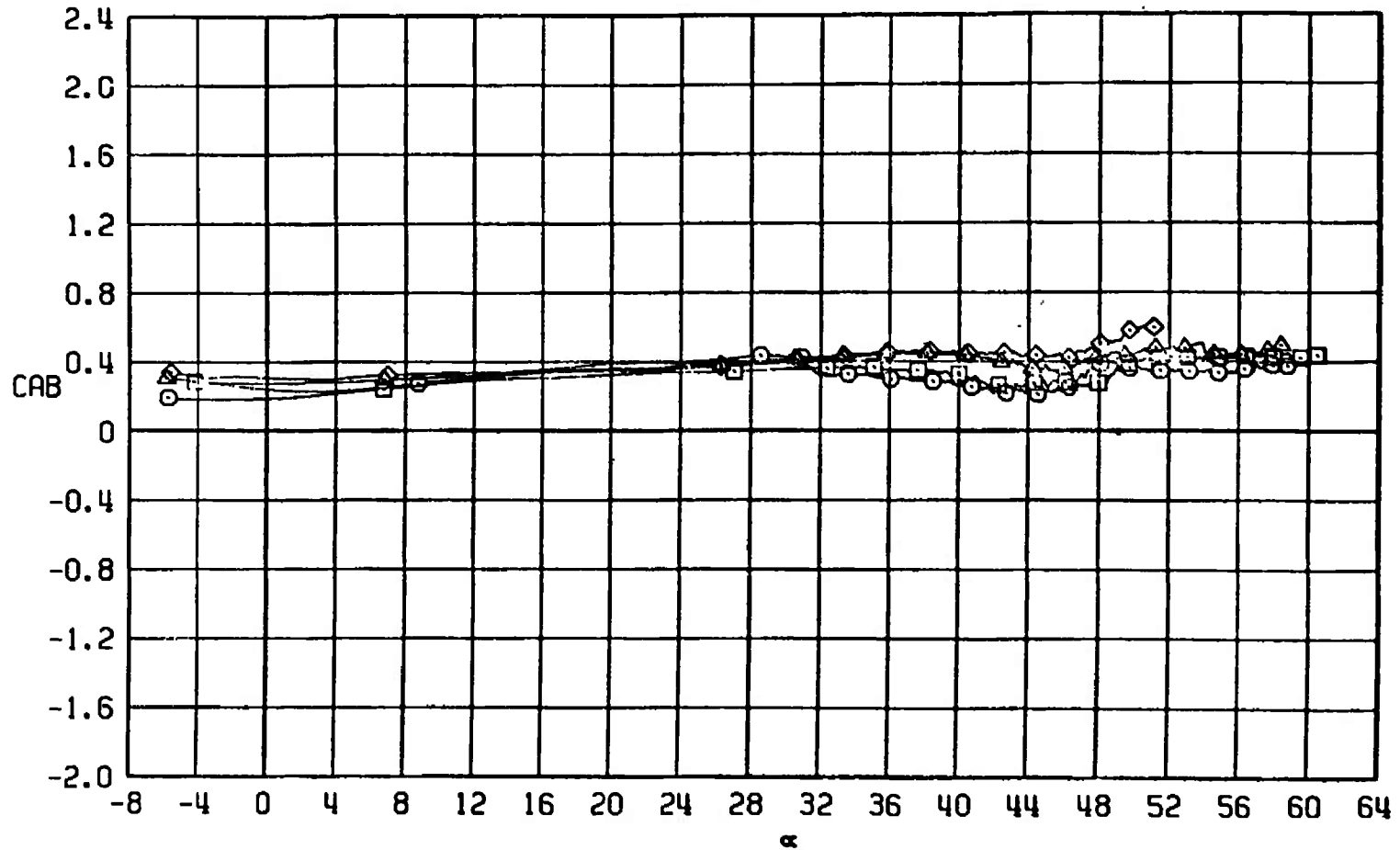
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF31	0	0	0	0	0	0
□	B1WOF31	0	0	-10	0	-10	0
△	B1WOF31	0	0	-20	0	-20	0
◇	B1WOF31	0	0	-30	0	-30	0



c. CA versus α
Figure 58. Continued.

TEST CENTER NSRDC TEST 7

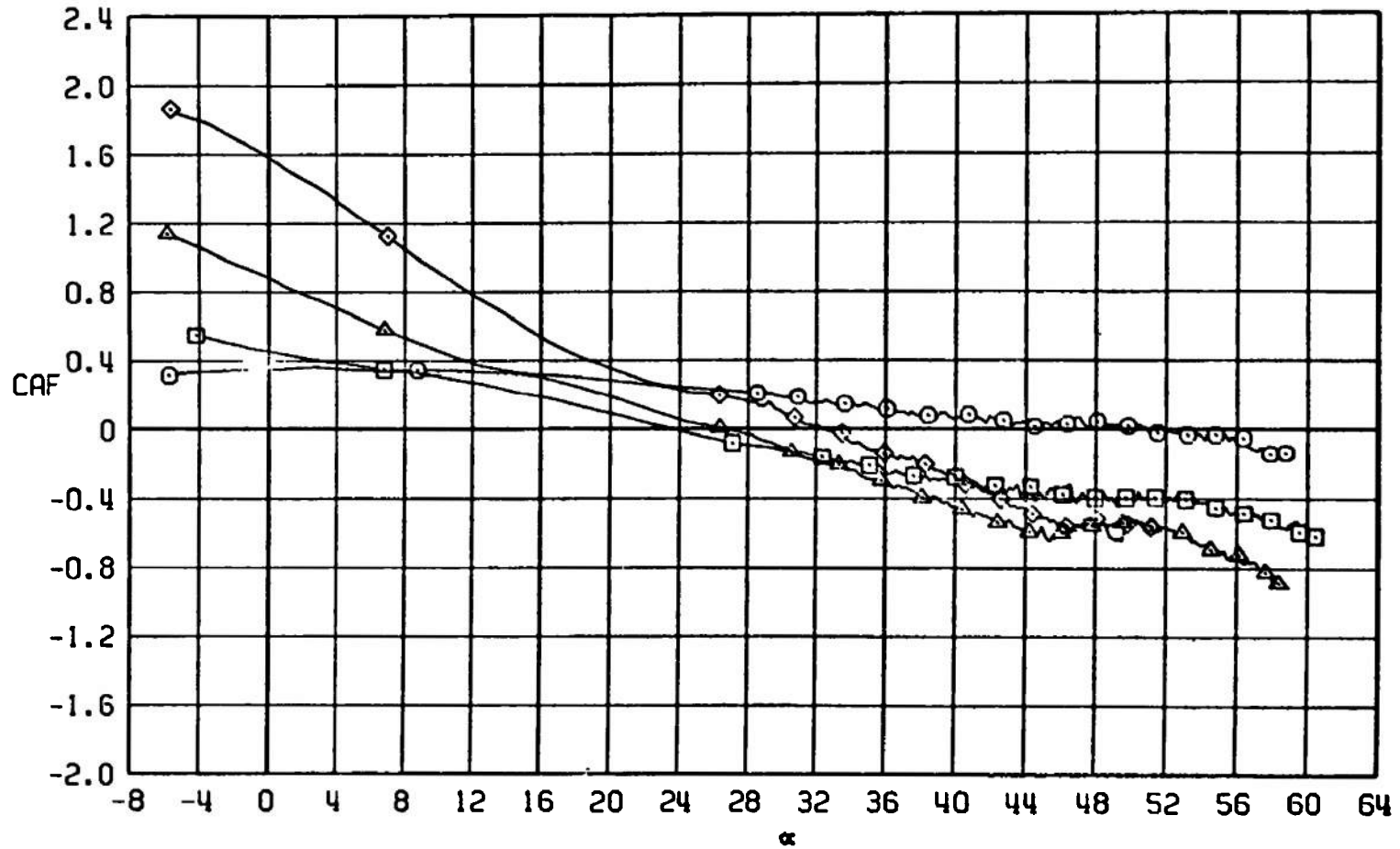
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF31	0	0	0	0	0	0
□	B1WOF31	0	0	-10	0	-10	0
△	B1WOF31	0	0	-20	0	-20	0
◇	B1WOF31	0	0	-30	0	-30	0



d. CAB versus α
Figure 58. Continued.

TEST CENTER NSRDC TEST 7

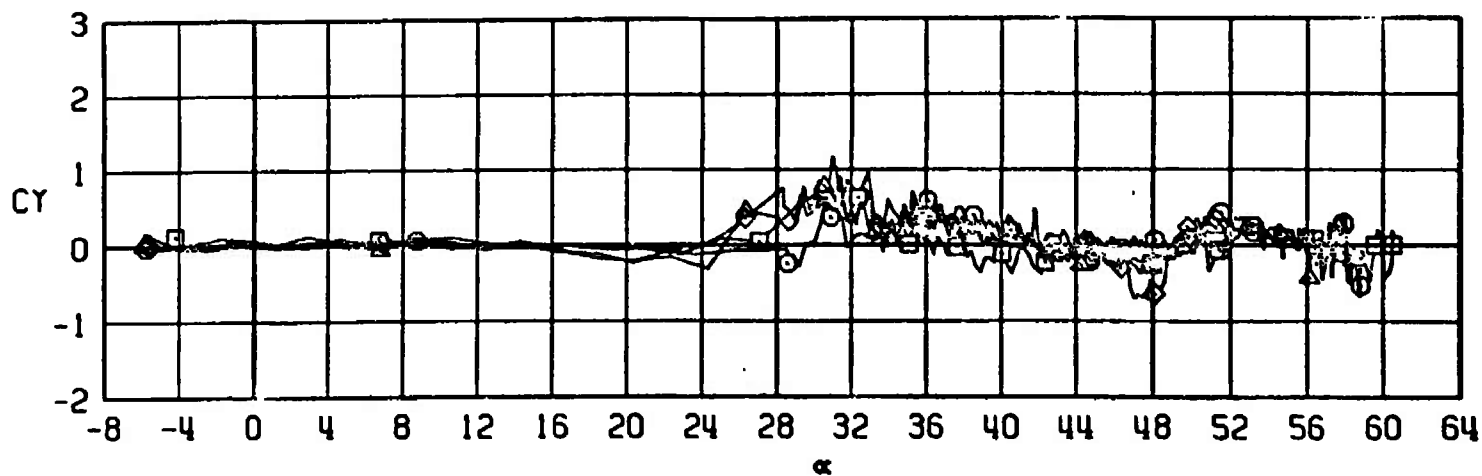
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



e. CAF versus α
Figure 58. Continued.

TEST CENTER NSRDC TEST 7

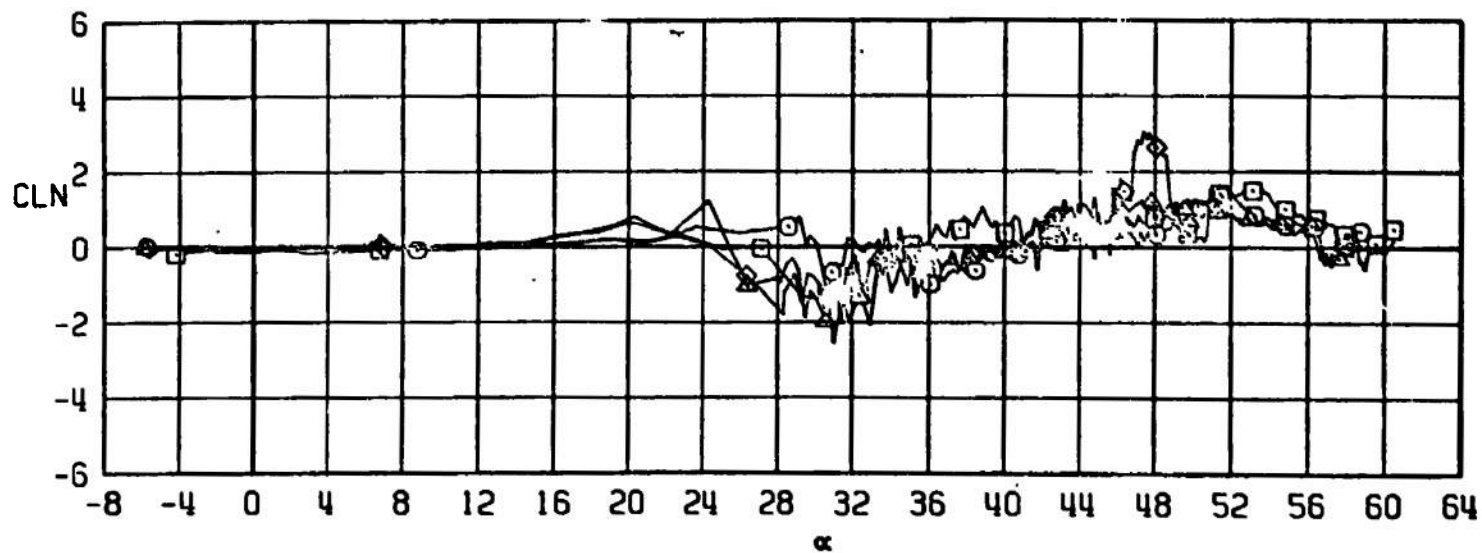
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



f. CY versus α
Figure 58. Continued.

TEST CENTER NSRDC TEST 7

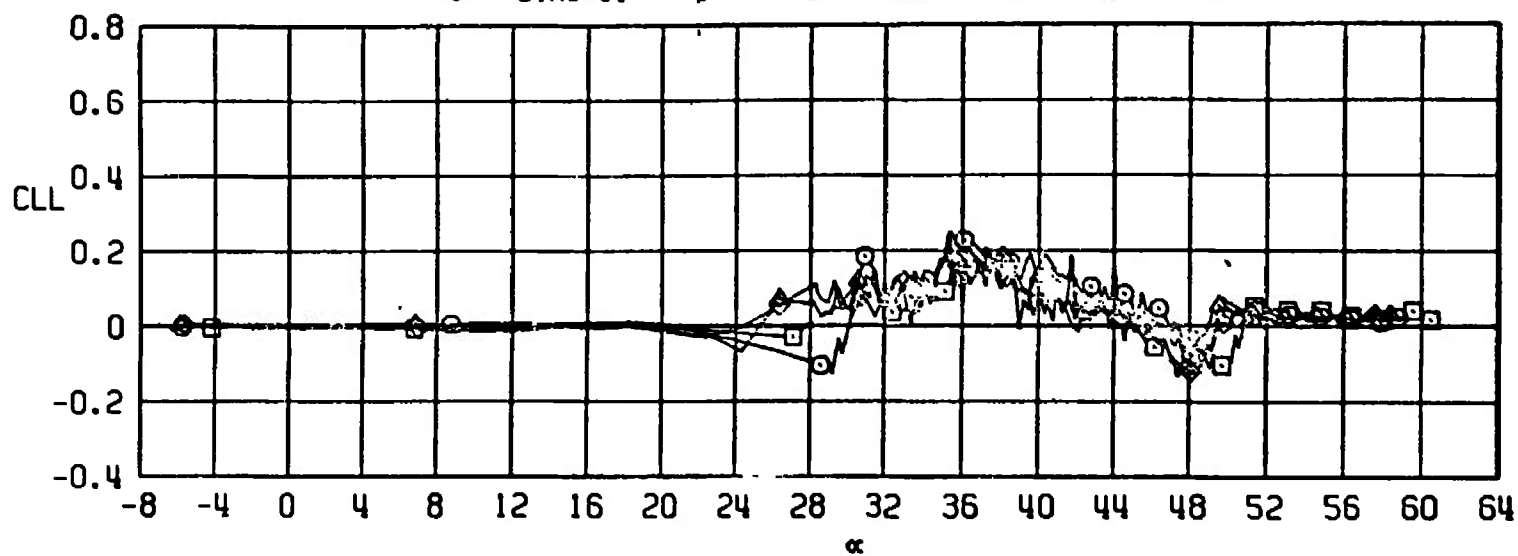
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



g. CLN versus α
Figure 58. Continued.

TEST CENTER NSRDC TEST 7

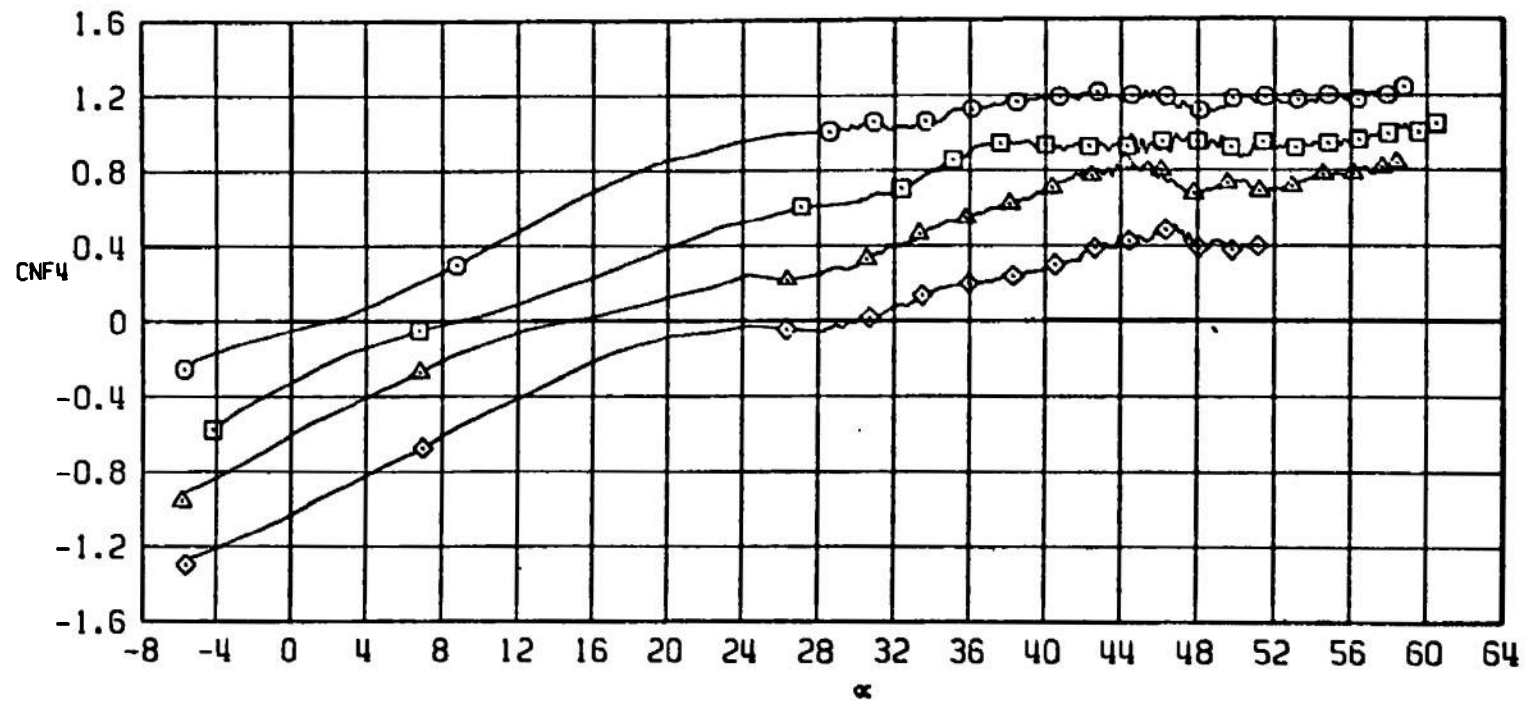
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



h. CLL versus α
Figure 58. Continued.

TEST CENTER NSRDC TEST 7

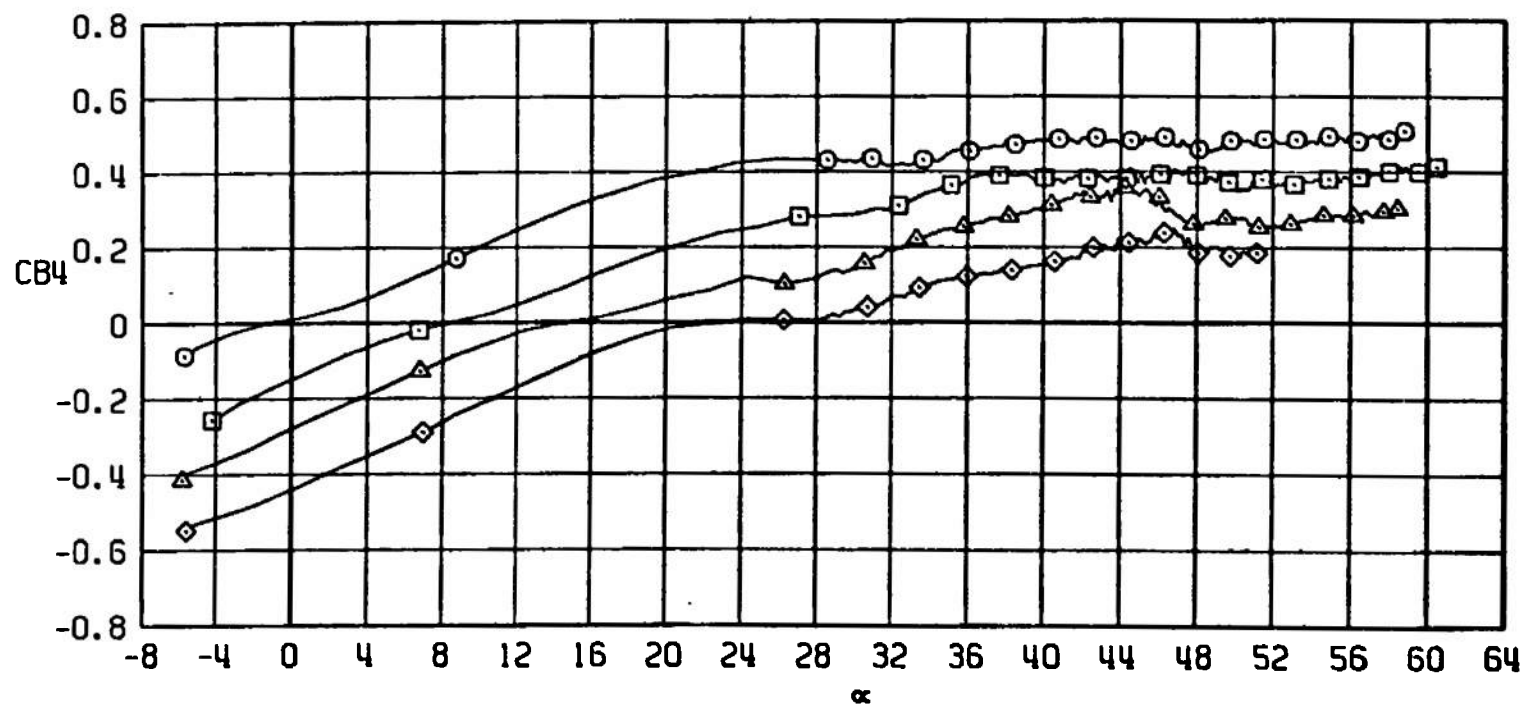
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF31	0	0	0	0	0	0
□	B1WOF31	0	0	-10	0	-10	0
△	B1WOF31	0	0	-20	0	-20	0
◇	B1WOF31	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 58. Continued.

TEST CENTER NSRDC TEST 7

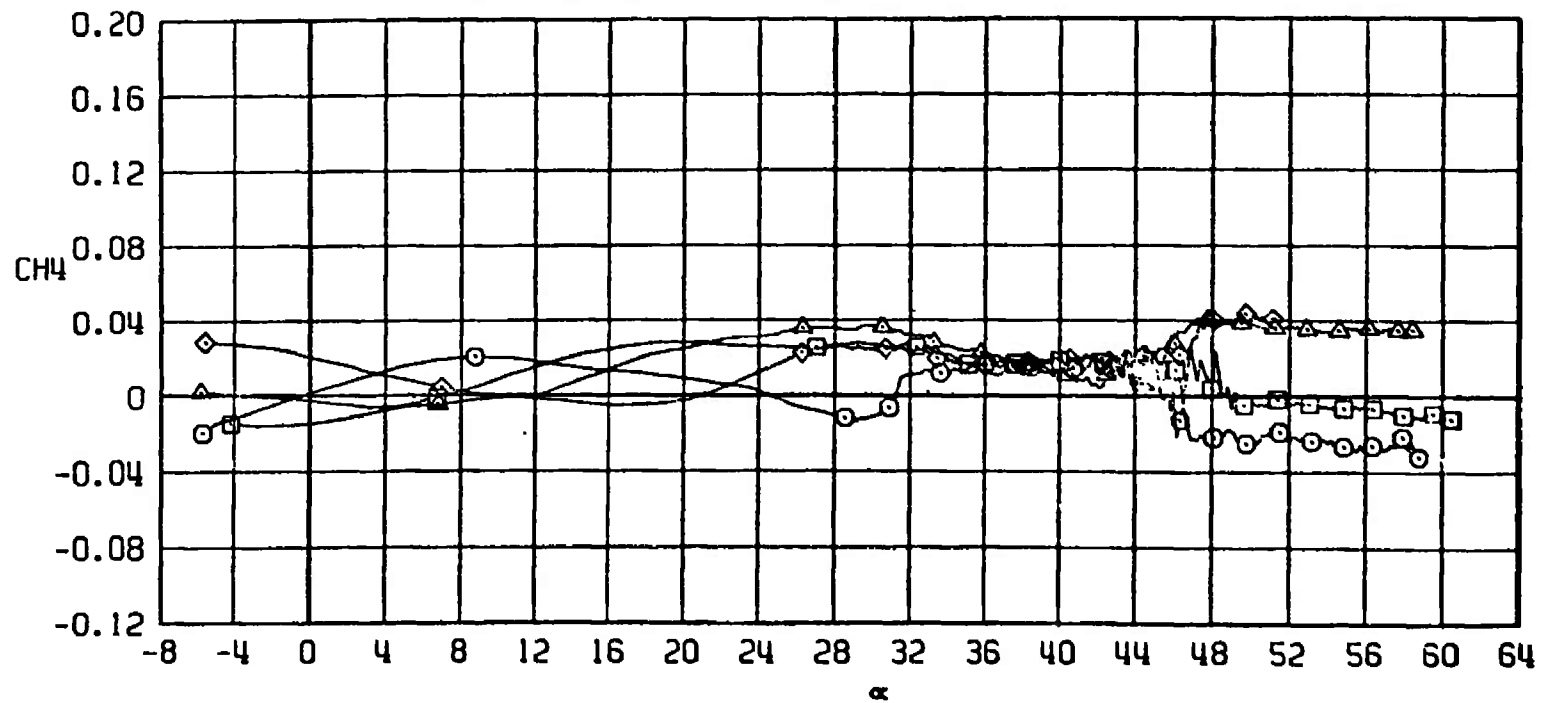
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF31	0	0	0	0	0	0
□	BIWOF31	0	0	-10	0	-10	0
△	BIWOF31	0	0	-20	0	-20	0
◇	BIWOF31	0	0	-30	0	-30	0



j. CB_4 versus α
Figure 58. Continued.

TEST CENTER NSRDC TEST 7

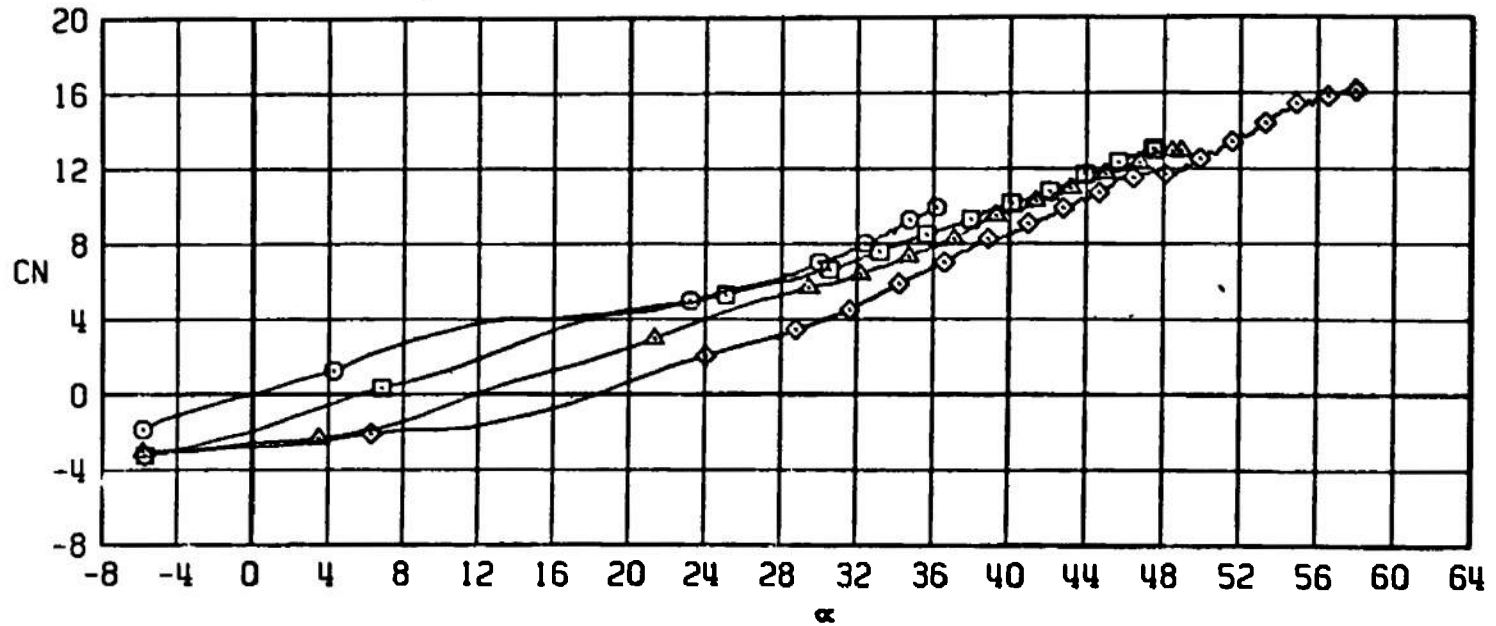
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF31	0	0	0	0	0	0
□	B1WOF31	0	0	-10	0	-10	0
△	B1WOF31	0	0	-20	0	-20	0
◇	B1WOF31	0	0	-30	0	-30	0



k. CH4 versus α
Figure 58. Concluded.

TEST CENTER NSROC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F34	0	0	0	0	0	0
□	B1W0F34	0	0	-10	0	-10	0
△	B1W0F34	0	0	-20	0	-20	0
◇	B1W0F34	0	0	-30	0	-30	0

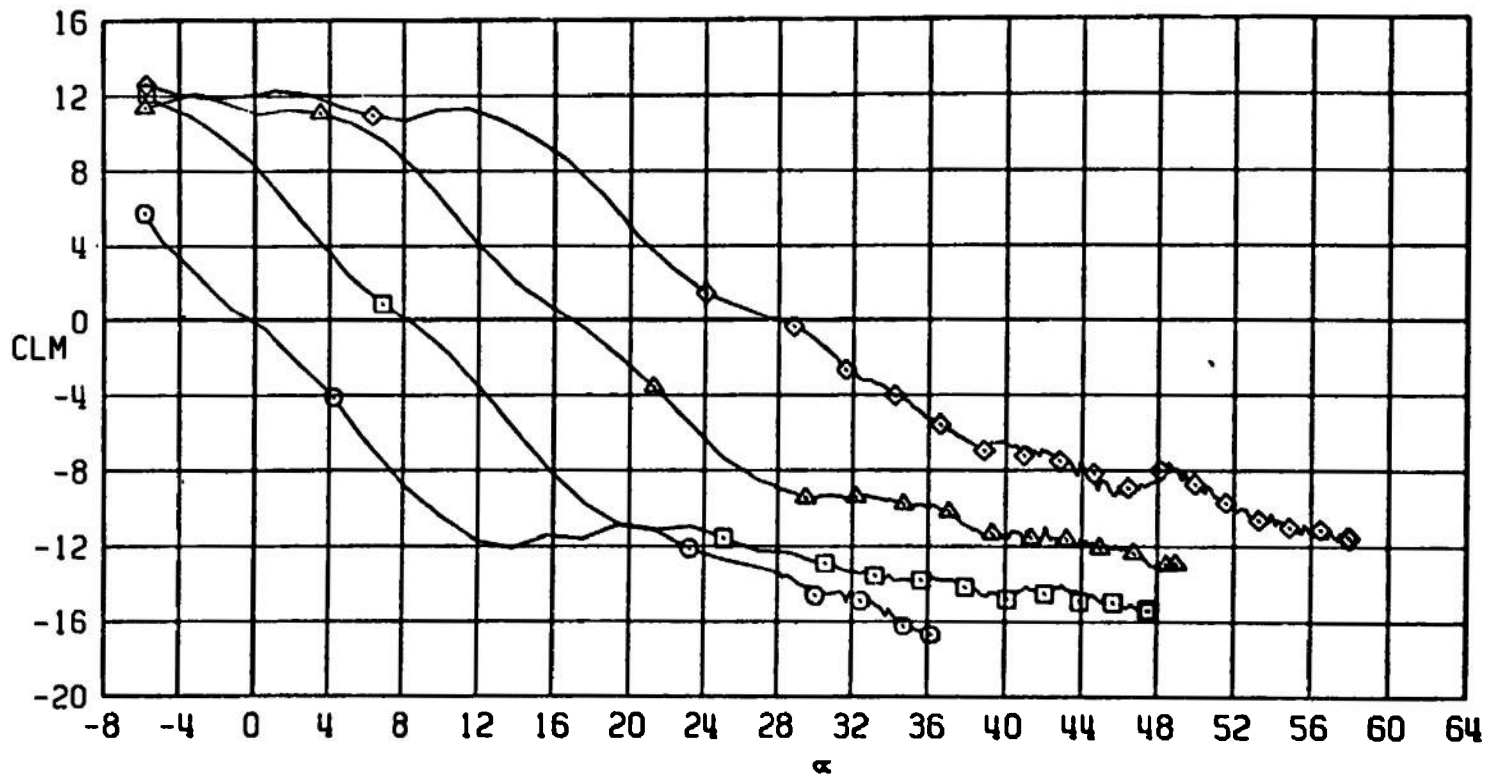


a. C_N versus α

Figure 59. Test No. 7, comparison of aerodynamic coefficient of configuration B1W0F34 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.8$.

TEST CENTER NSRDC TEST 7

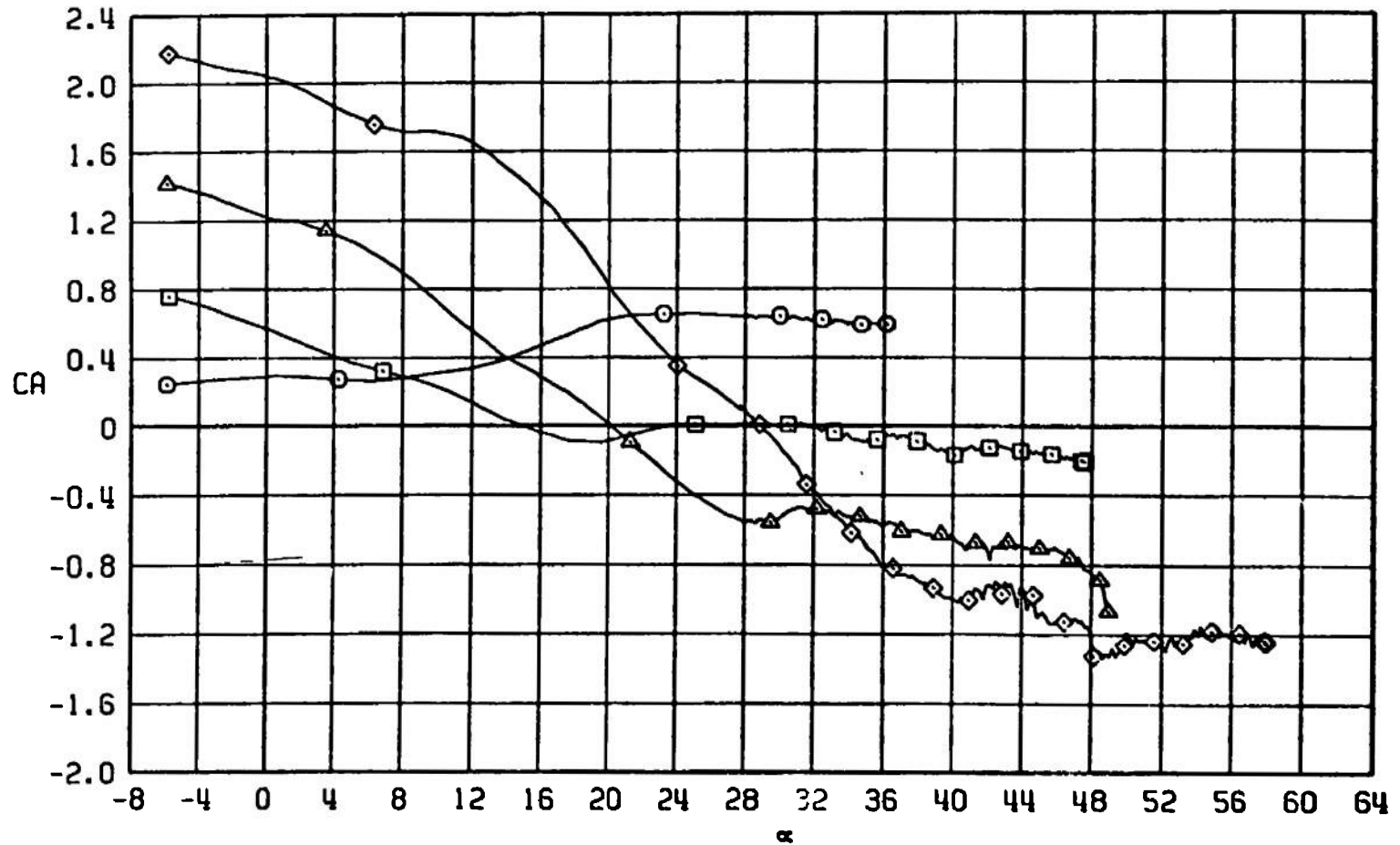
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



b. CLM versus α
Figure 59. Continued.

TEST CENTER NSRDC TEST 7

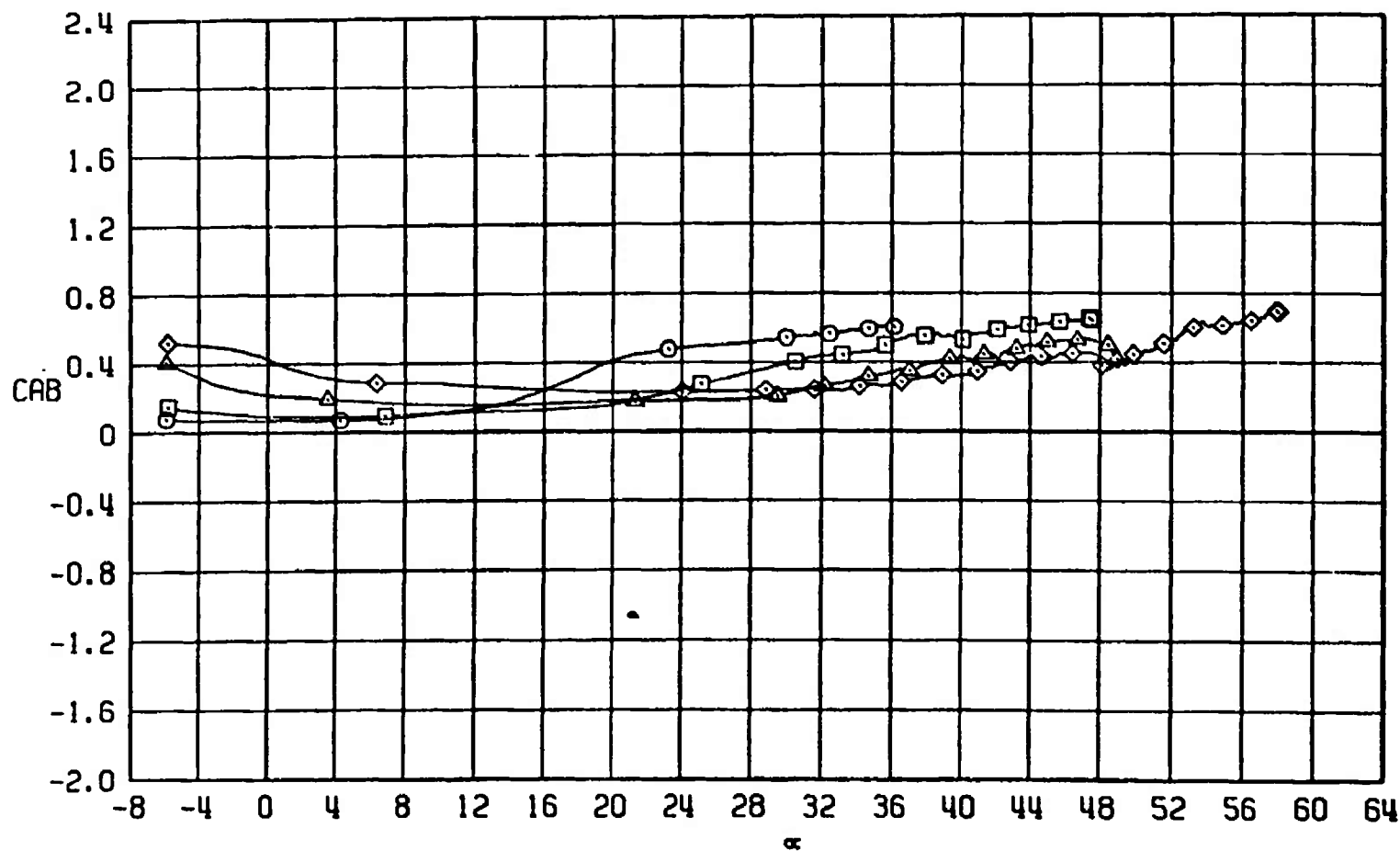
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



c. CA versus α
Figure 59. Continued.

TEST CENTER NSROC TEST 7

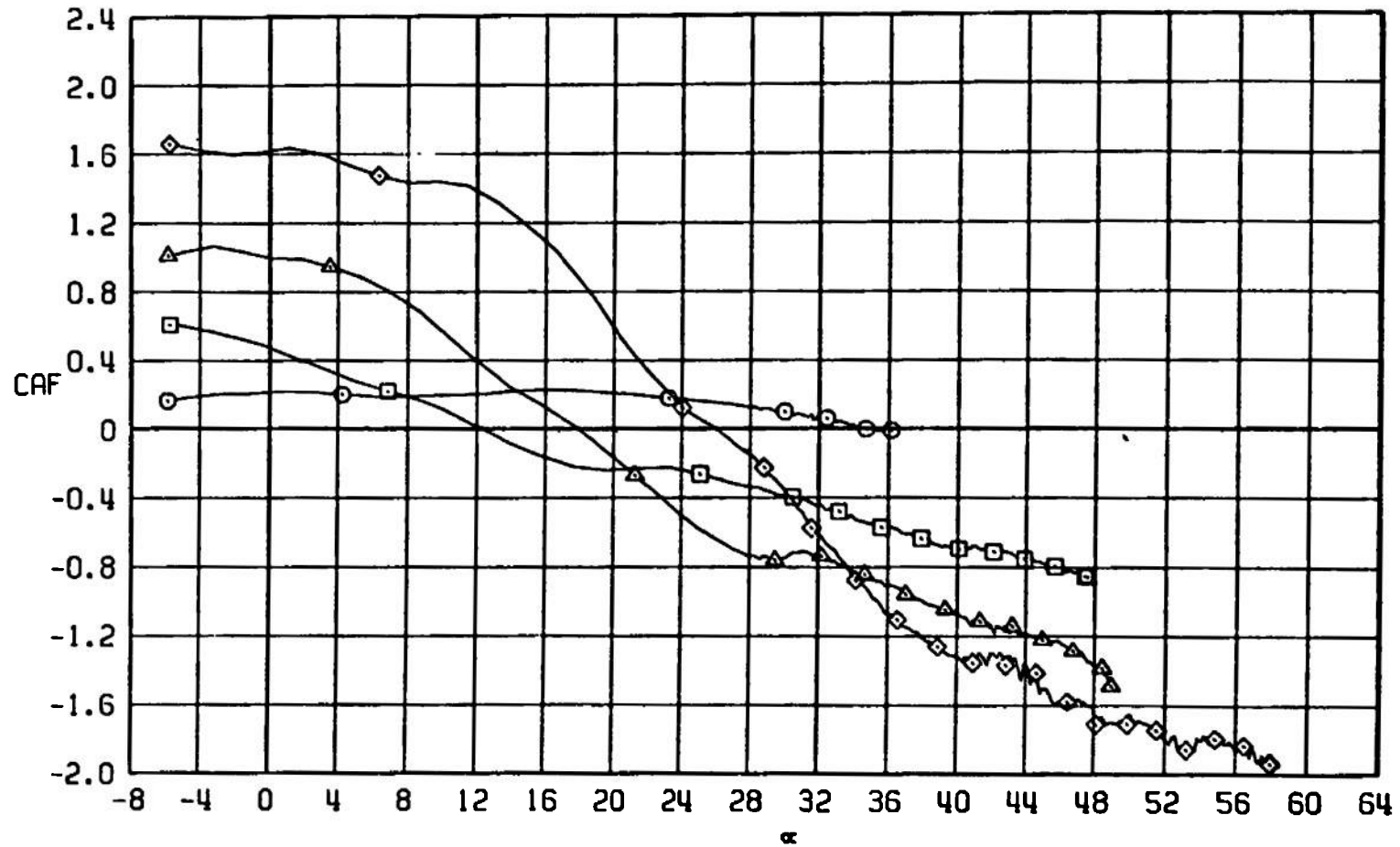
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



d. CAB versus α
Figure 59. Continued.

TEST CENTER NSRDC TEST 7

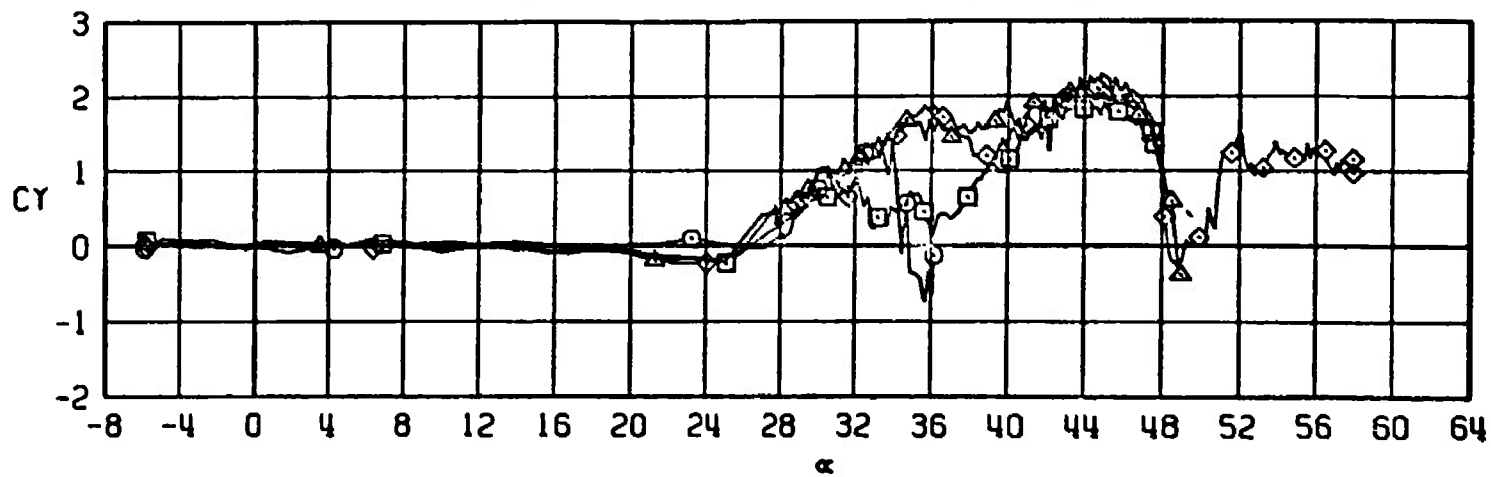
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



e. CAF versus α
Figure 59. Continued.

TEST CENTER NSRDC TEST 7

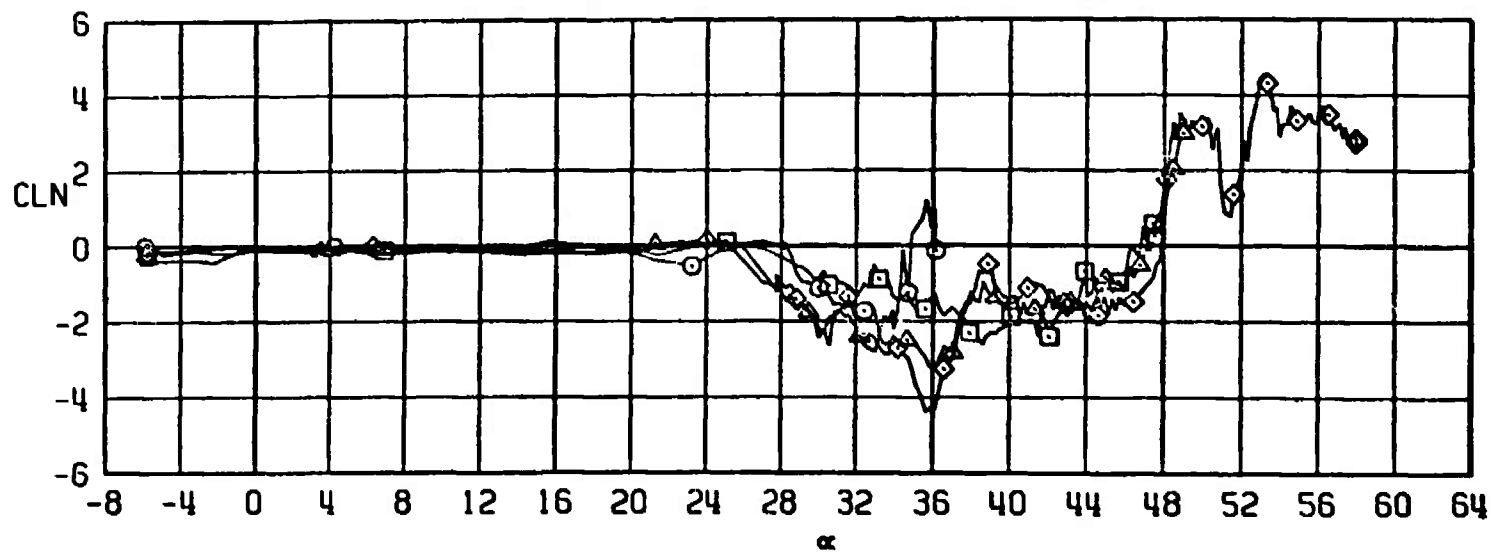
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



f. CY versus α
Figure 59. Continued.

TEST CENTER NSRDC TEST 7

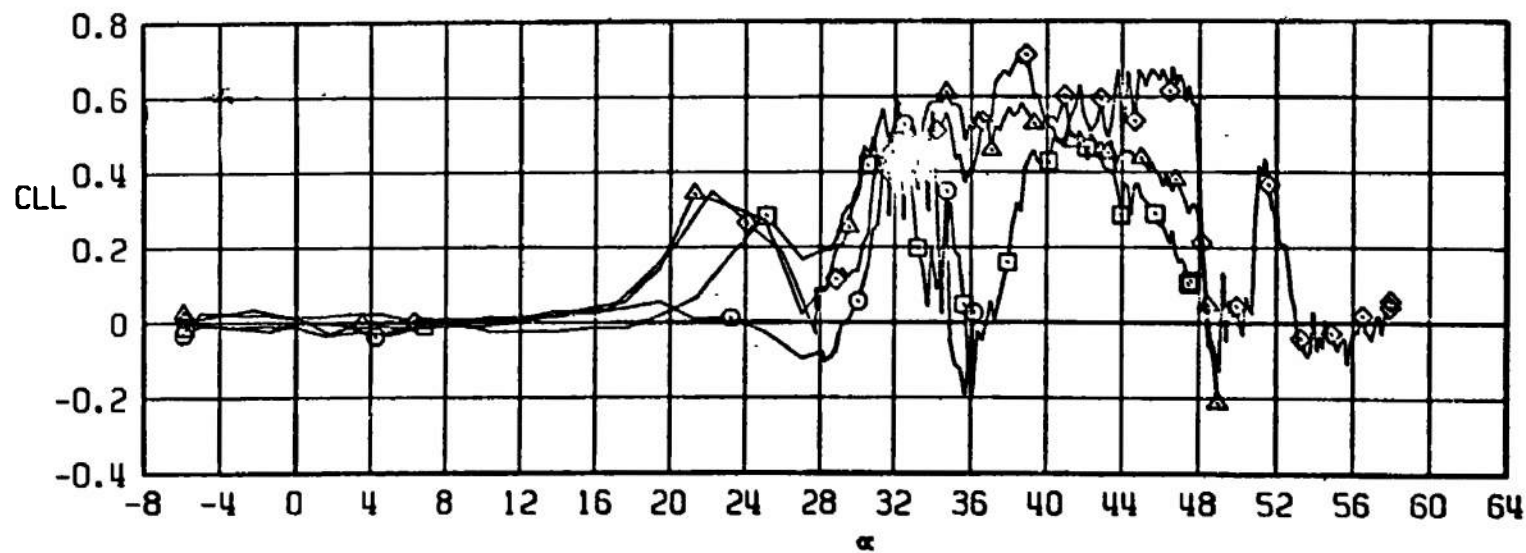
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



g. CLN versus α
Figure 59. Continued.

TEST CENTER NSRDC TEST 7

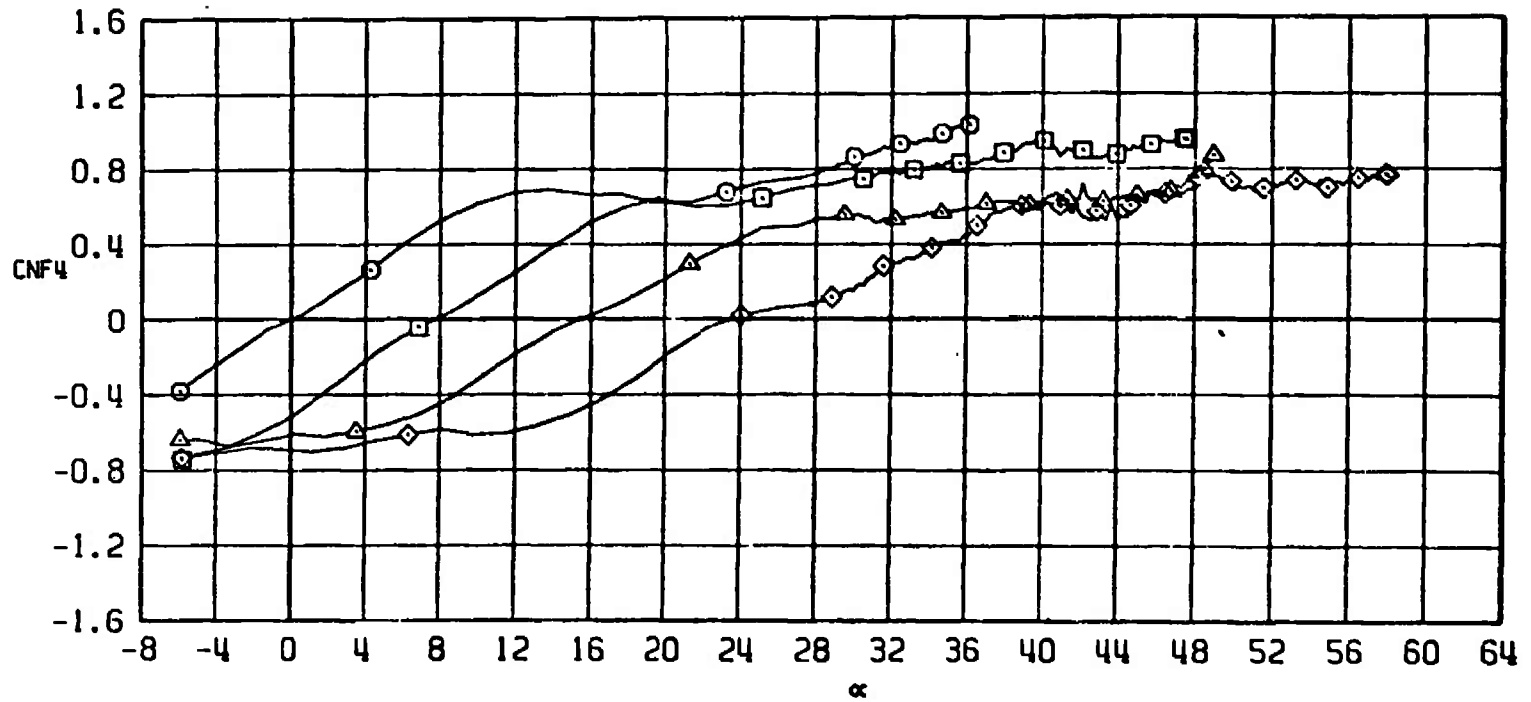
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



h. CLL versus α
Figure 59. Continued.

TEST CENTER NSRDC TEST 7

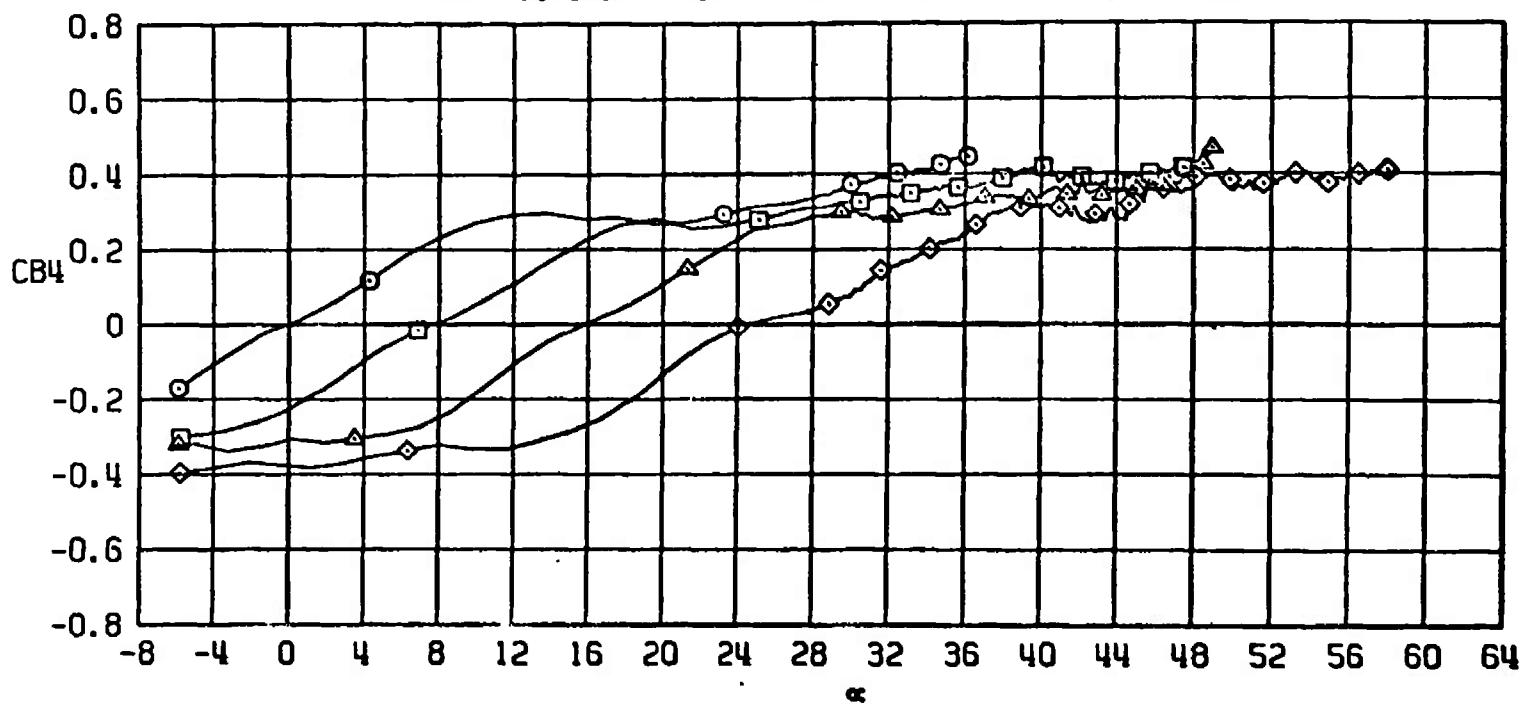
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF34	0	0	0	0	0	0
□	81WOF34	0	0	-10	0	-10	0
△	81WOF34	0	0	-20	0	-20	0
◇	81WOF34	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 59. Continued.

TEST CENTER NSRDC TEST 7

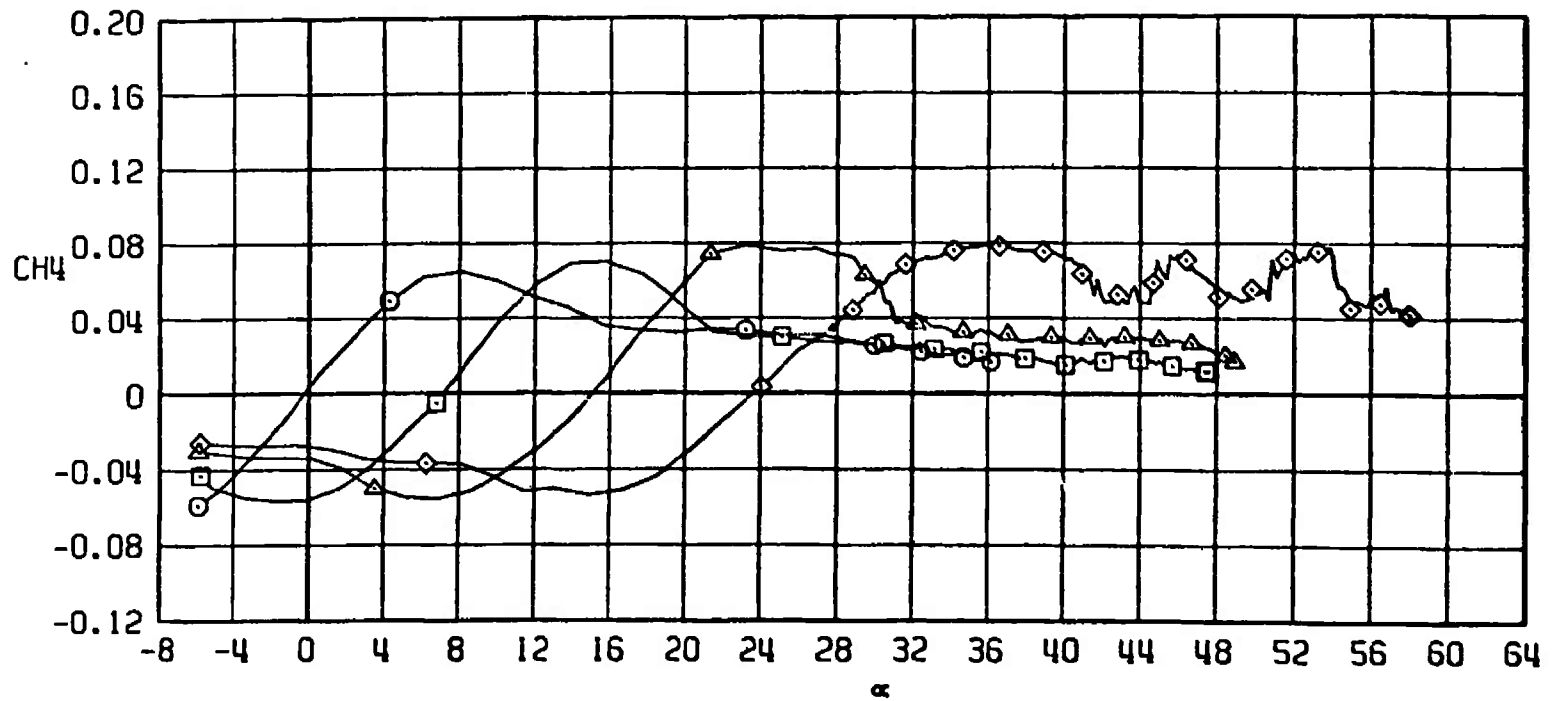
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



j. CB4 versus α
Figure 59. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF34	0	0	0	0	0	0
□	B1WOF34	0	0	-10	0	-10	0
△	B1WOF34	0	0	-20	0	-20	0
◇	B1WOF34	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 59. Concluded.

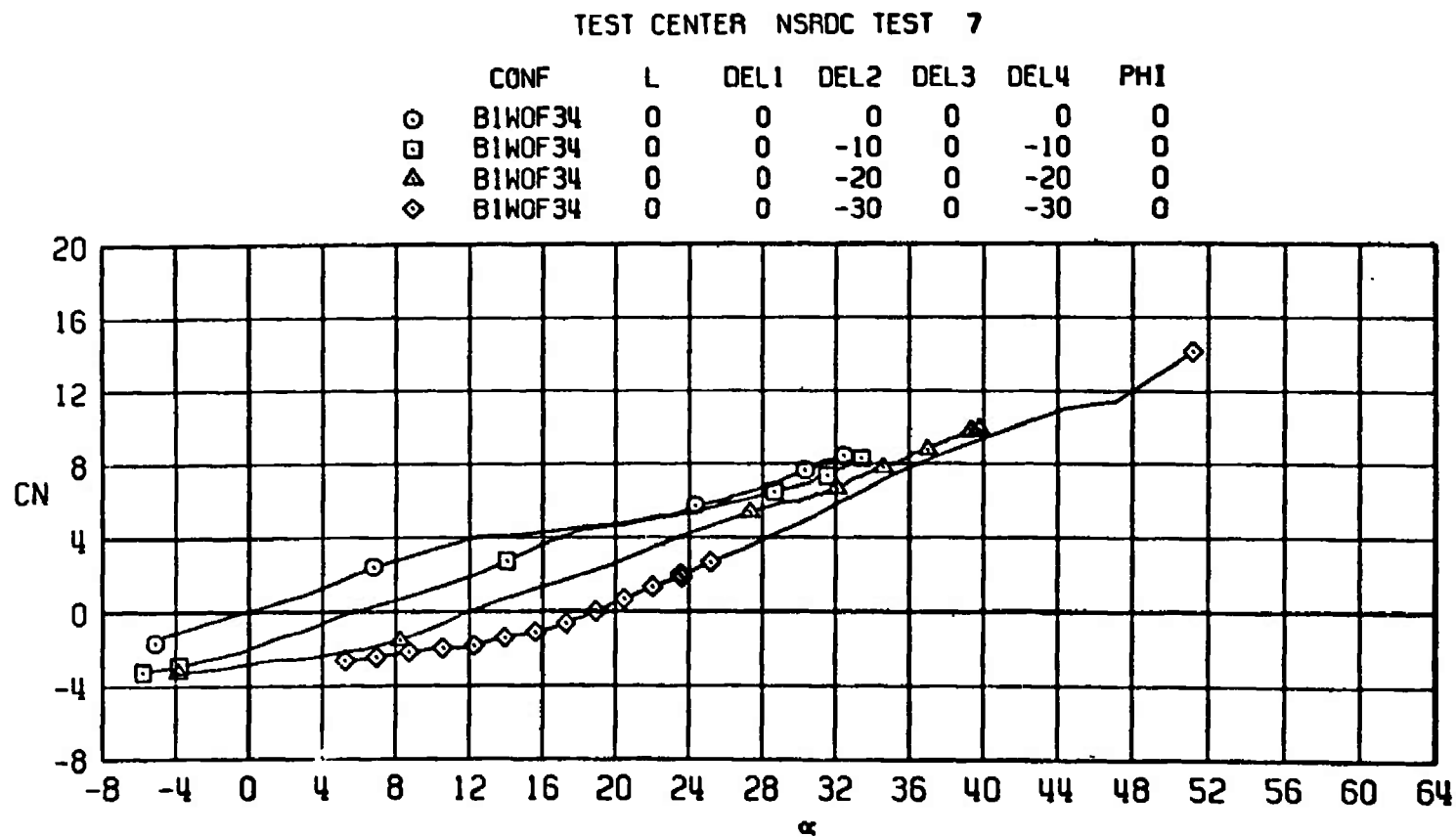
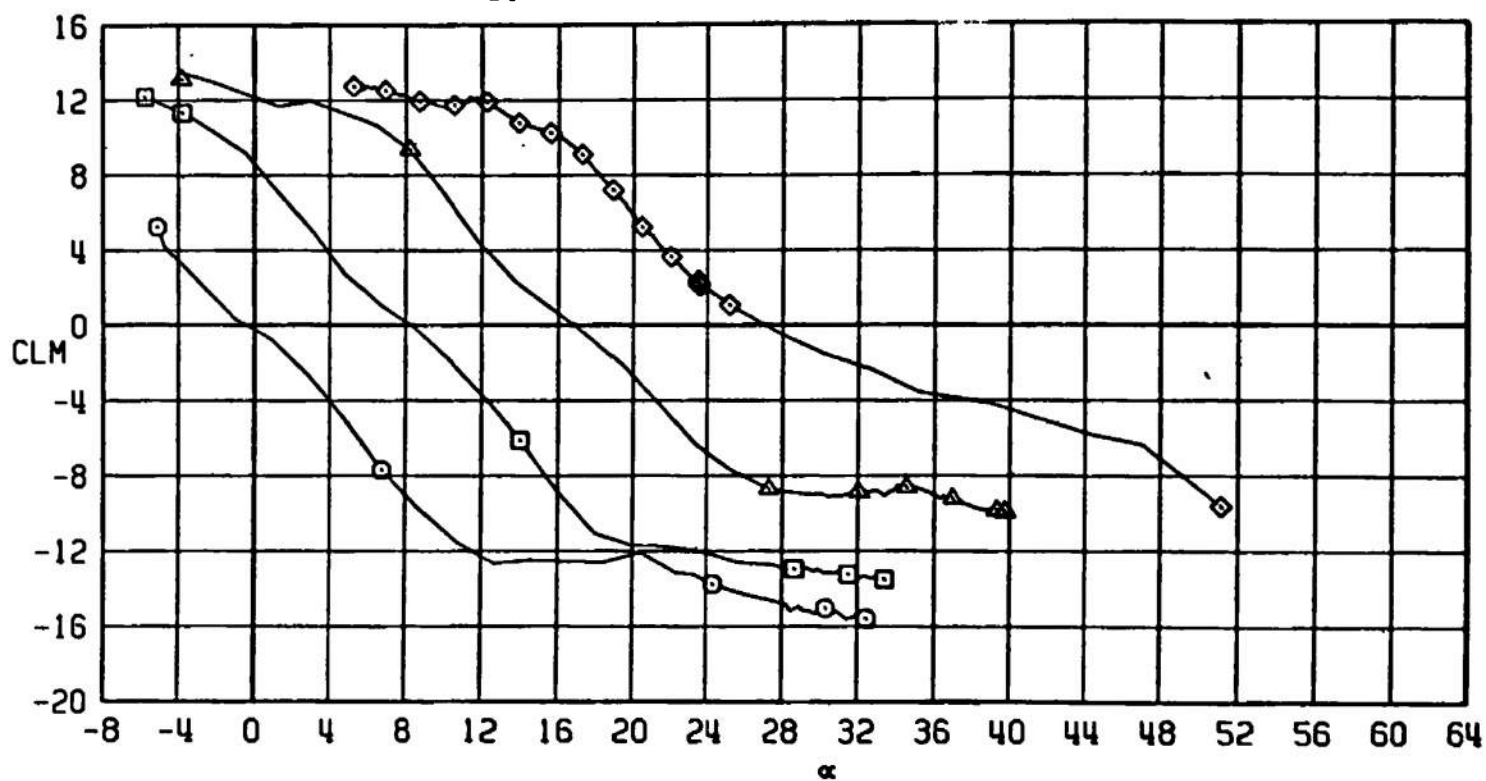
a. CN versus α

Figure 60. Test No. 7, comparison of aerodynamic coefficients of configuration B1WOF34 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.9$.

TEST CENTER NSRDC TEST 7

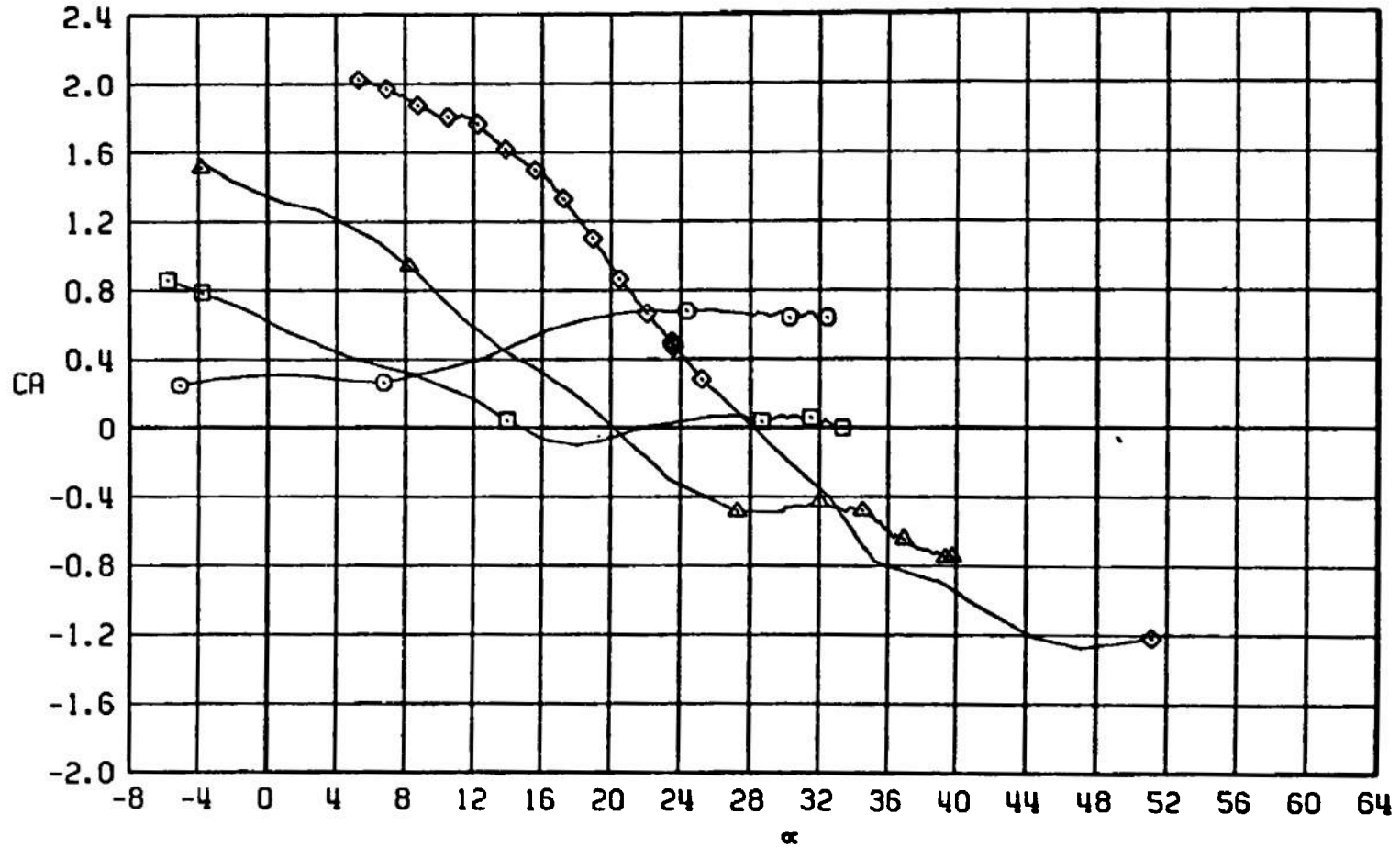
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



b. CLM versus α
Figure 60. Continued.

TEST CENTER NSRDC TEST 7

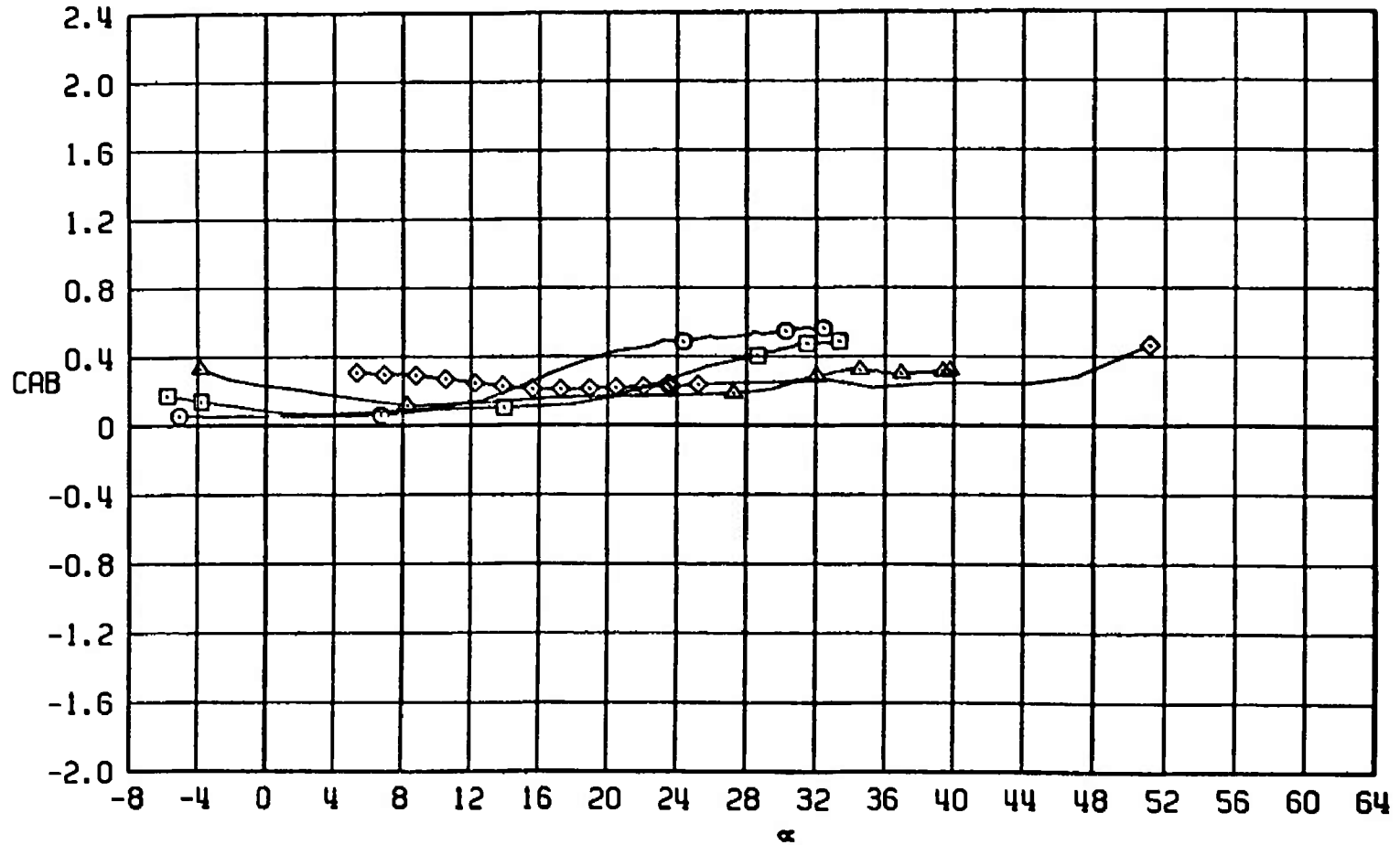
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF34	0	0	0	0	0	0
□	B1WOF34	0	0	-10	0	-10	0
△	B1WOF34	0	0	-20	0	-20	0
◇	B1WOF34	0	0	-30	0	-30	0



c. CA versus α
Figure 60. Continued.

TEST CENTER NSRDC TEST 7

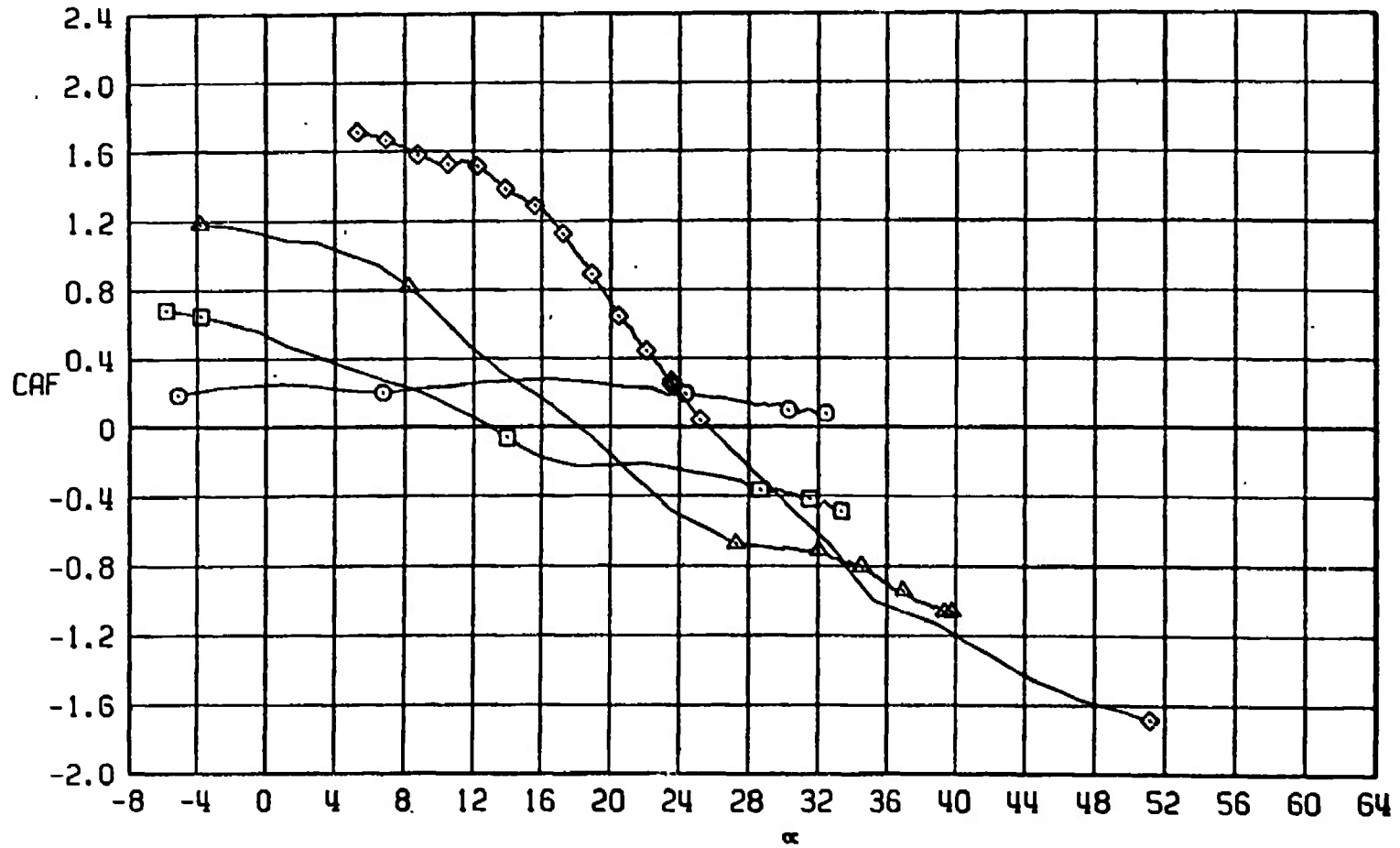
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



d. CAB versus α
Figure 60. Continued.

TEST CENTER NSRDC TEST 7

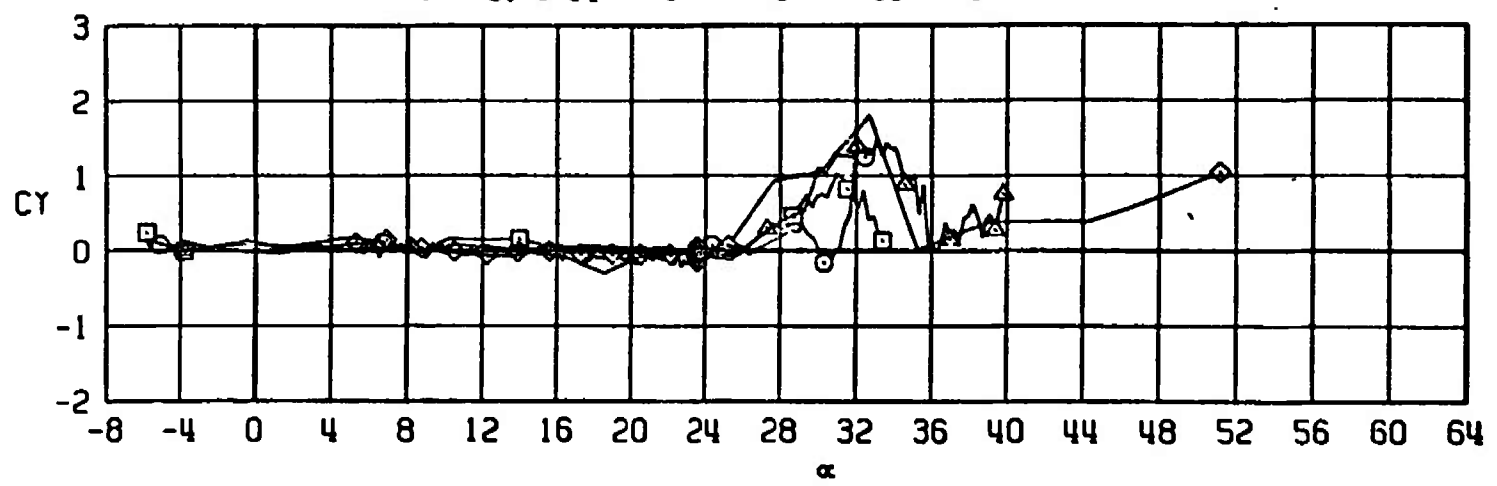
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



e. CAF versus α
Figure 60. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0

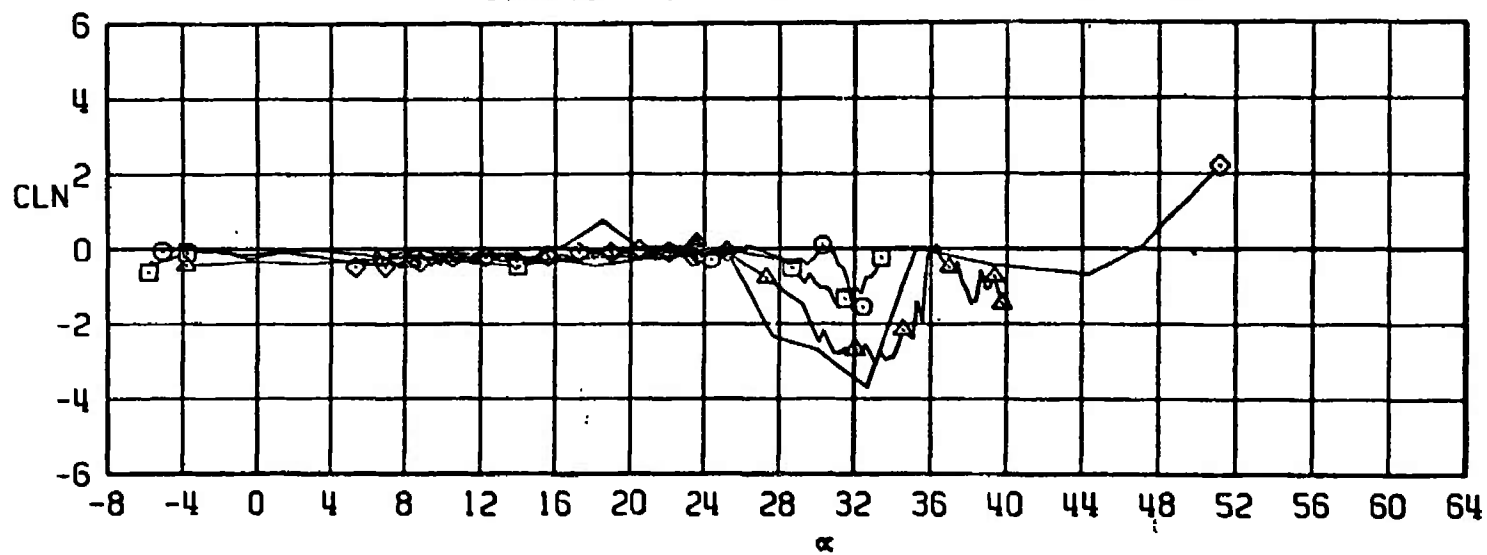


f. CY versus α
Figure 60. Continued.

450

TEST CENTER NSROC TEST 7

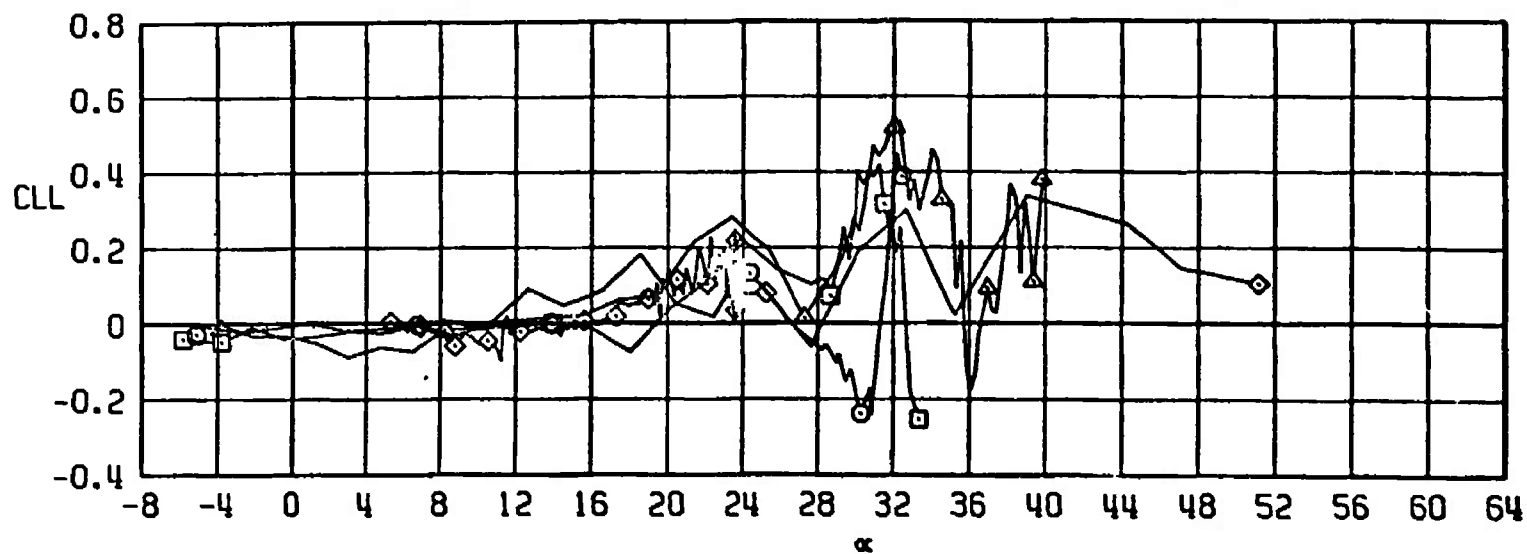
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



g. CLN versus α
Figure 60. Continued.

TEST CENTER NSRDC TEST 7

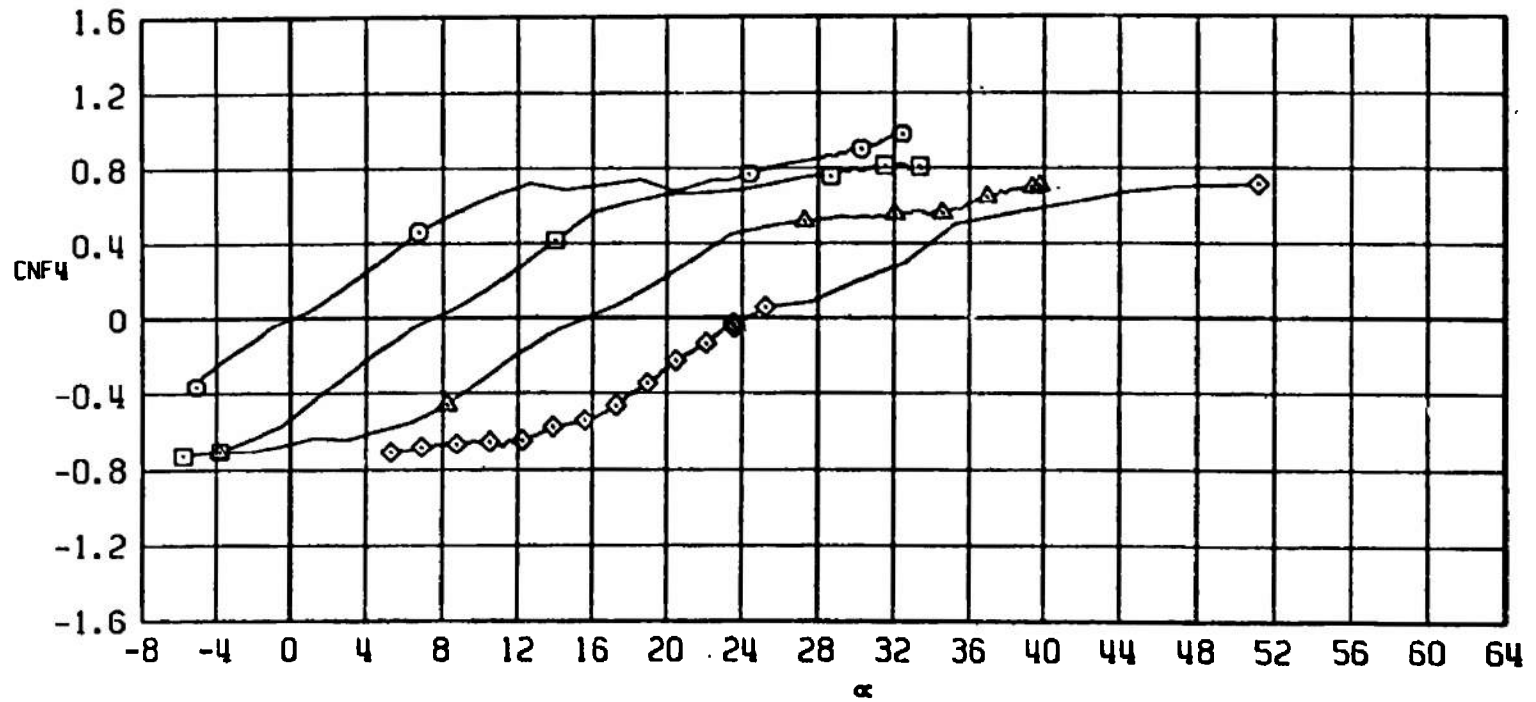
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



h. CLL versus α
Figure 60. Continued.

TEST CENTER NSRDC TEST 7

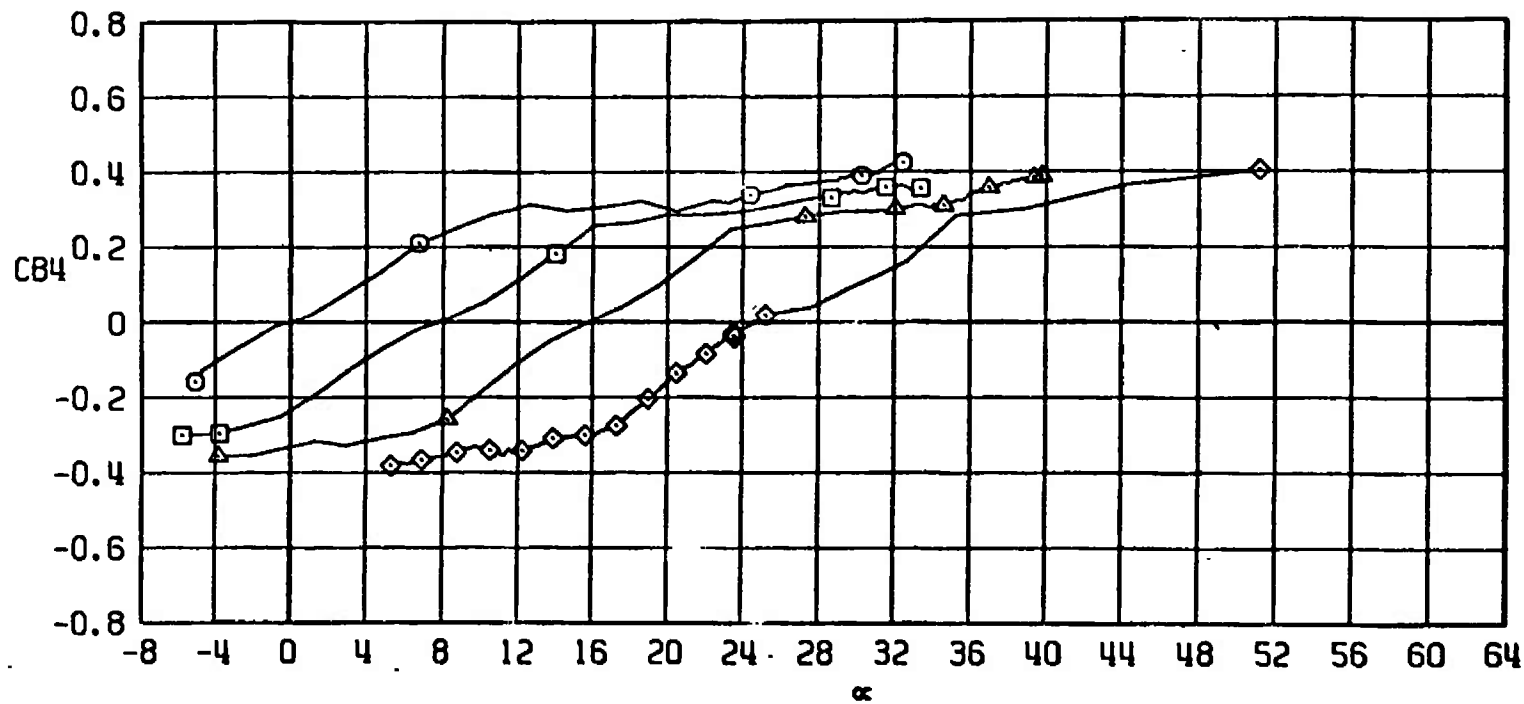
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 60. Continued.

TEST CENTER NSRDC TEST 7

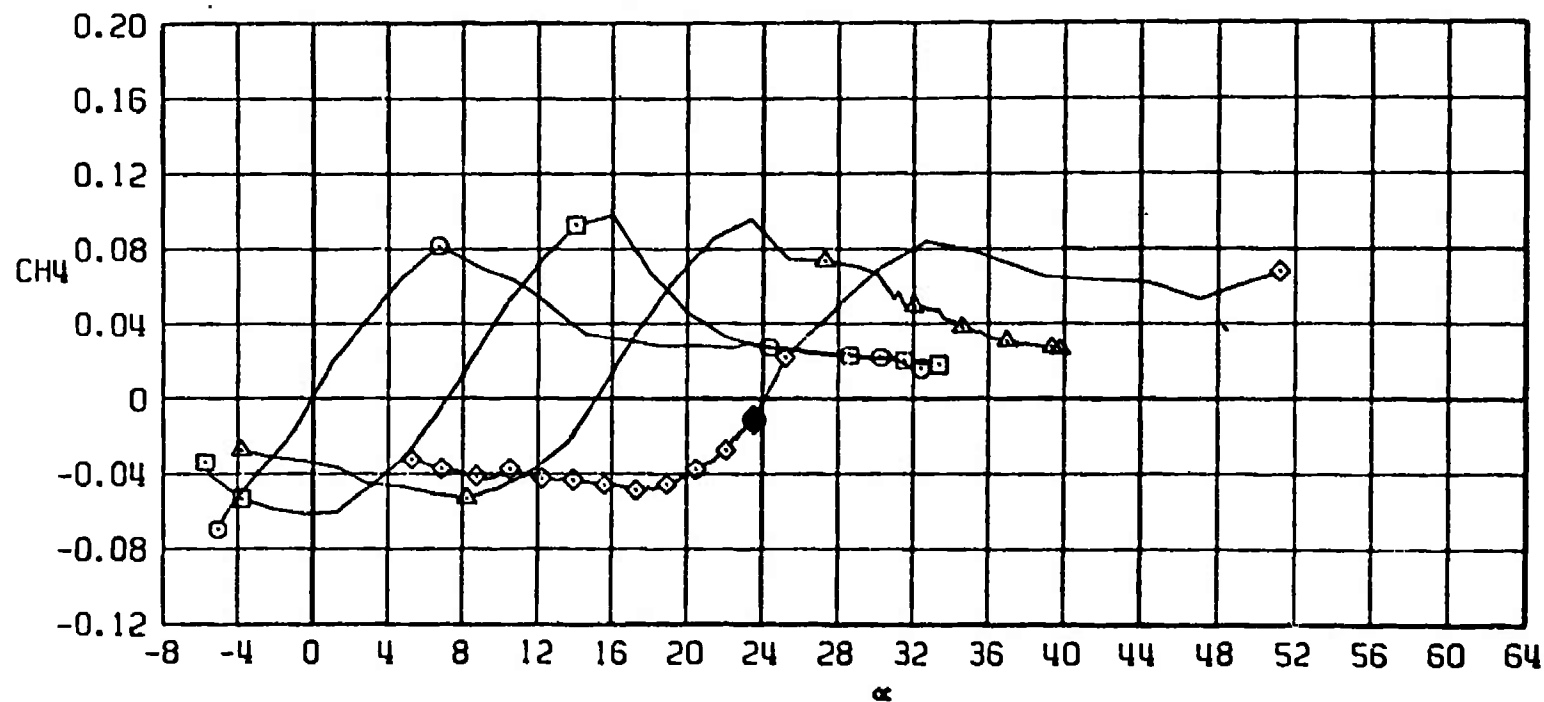
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



j. CB4 versus α
Figure 60. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 60. Concluded.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F34	0	0	0	0	0	0
□	B1W0F34	0	0	-10	0	-10	0
△	B1W0F34	0	0	-20	0	-20	0
◇	B1W0F34	0	0	-30	0	-30	0

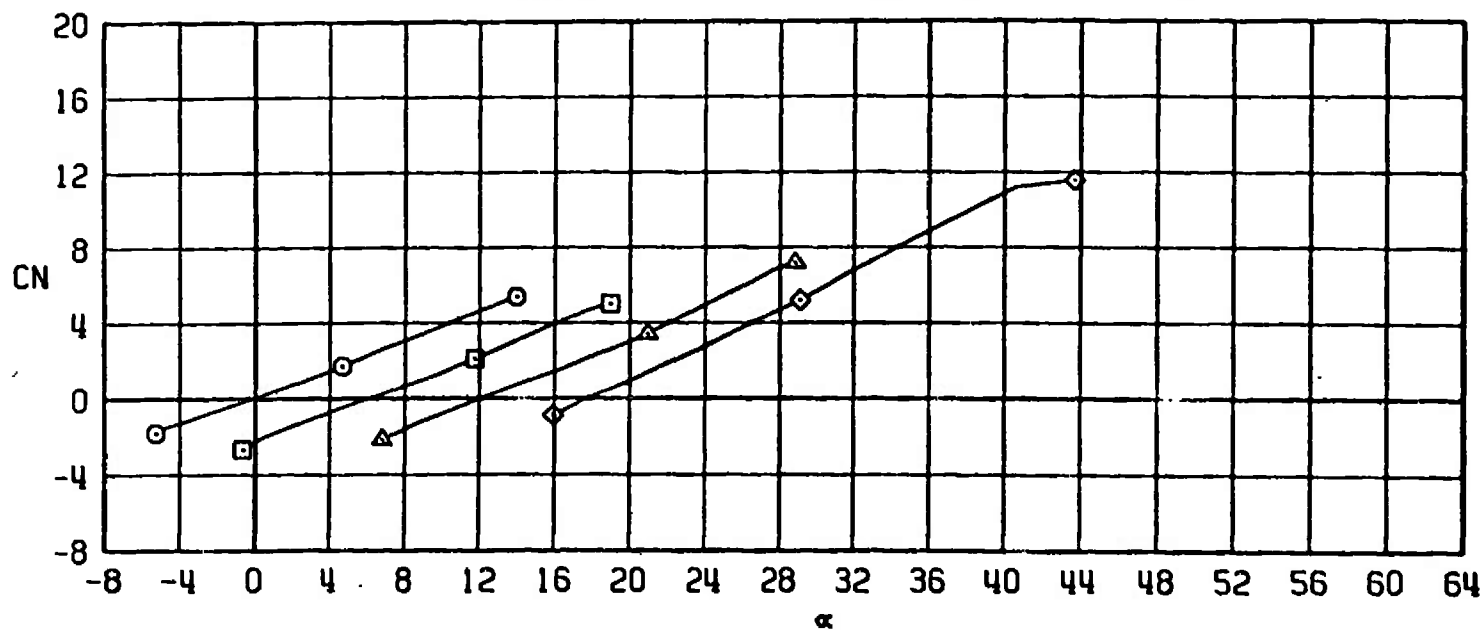
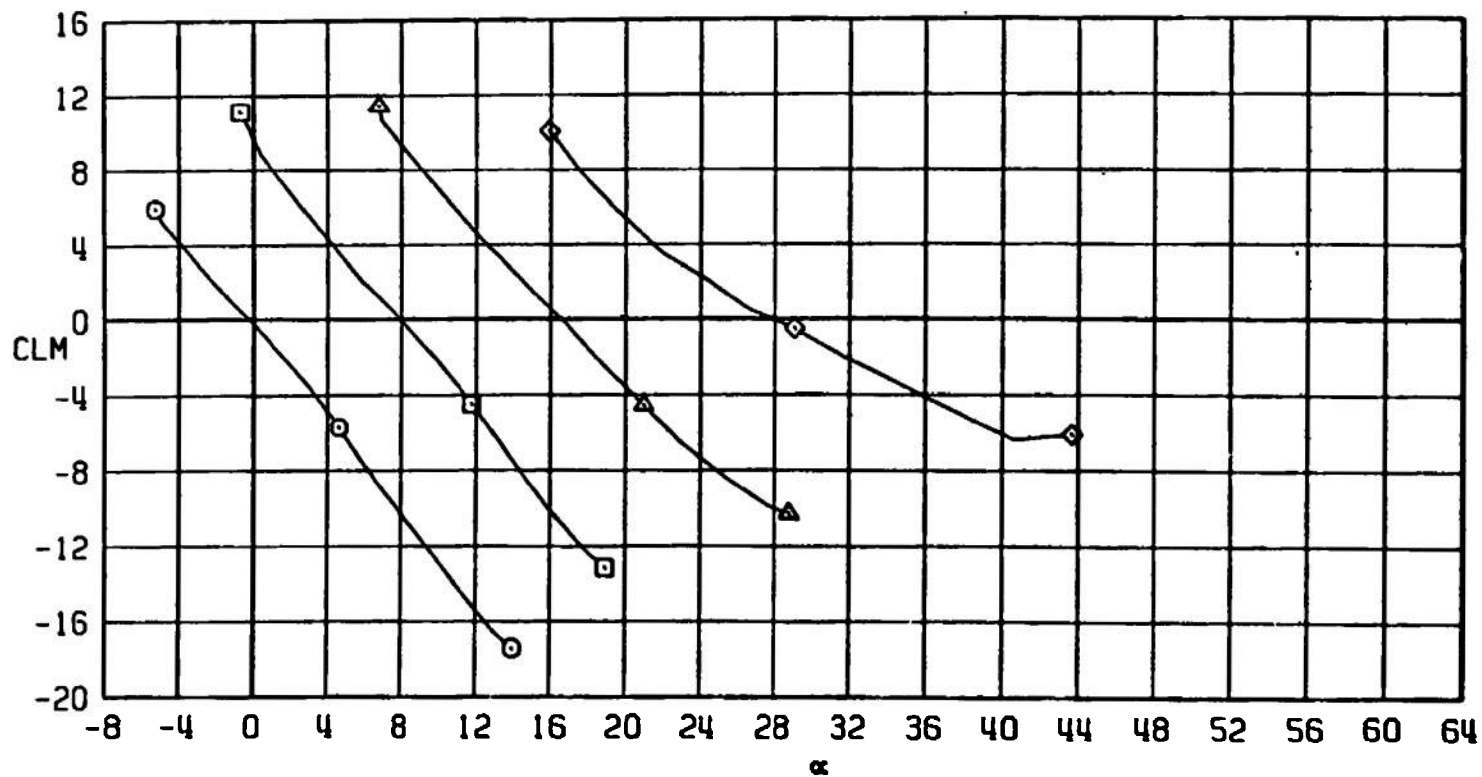
a. CN versus α

Figure 61. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F34 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.0$.

TEST CENTER NSRDC TEST 7

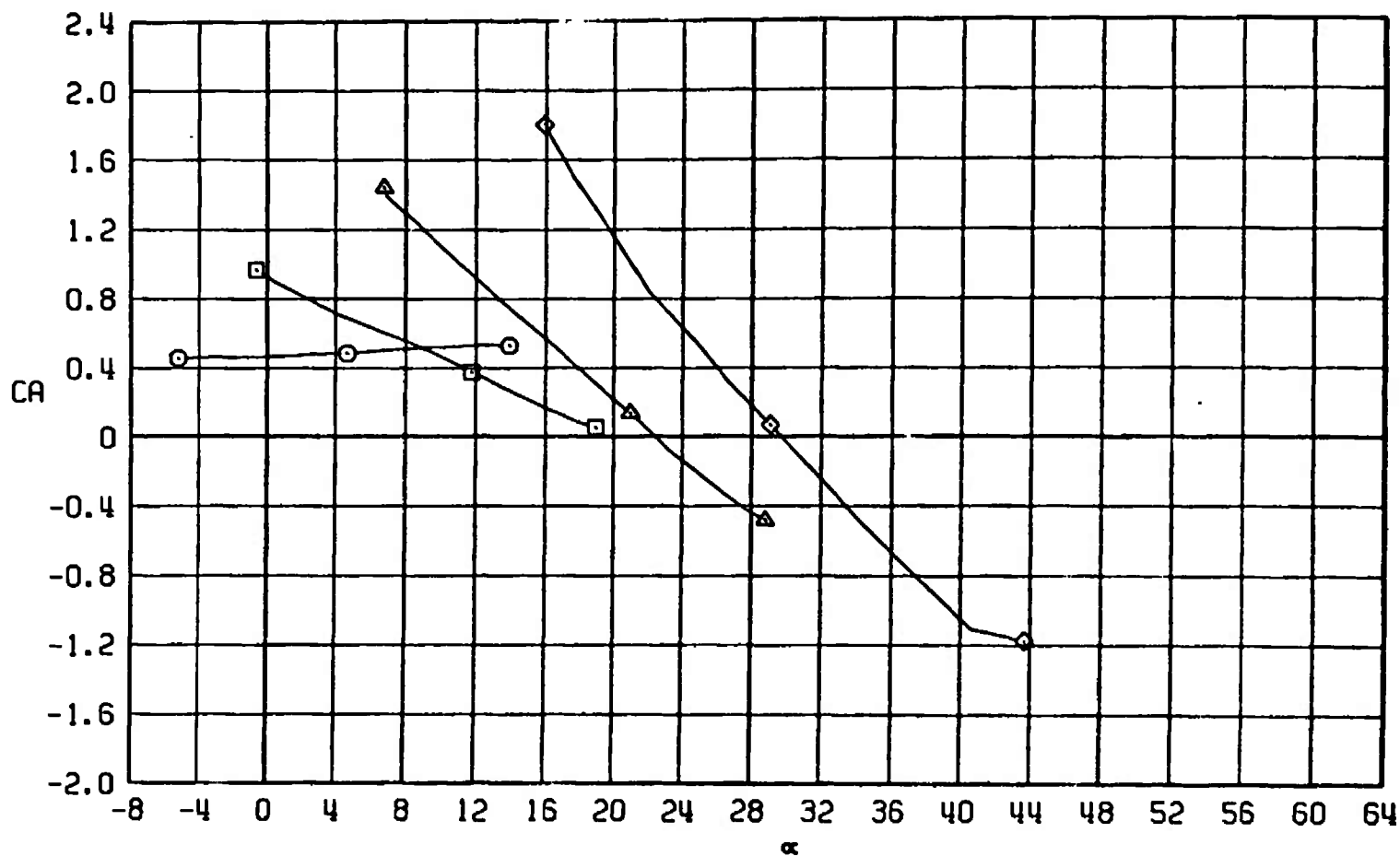
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



b. CLM versus α
Figure 61. Continued.

TEST CENTER NSROC TEST 7

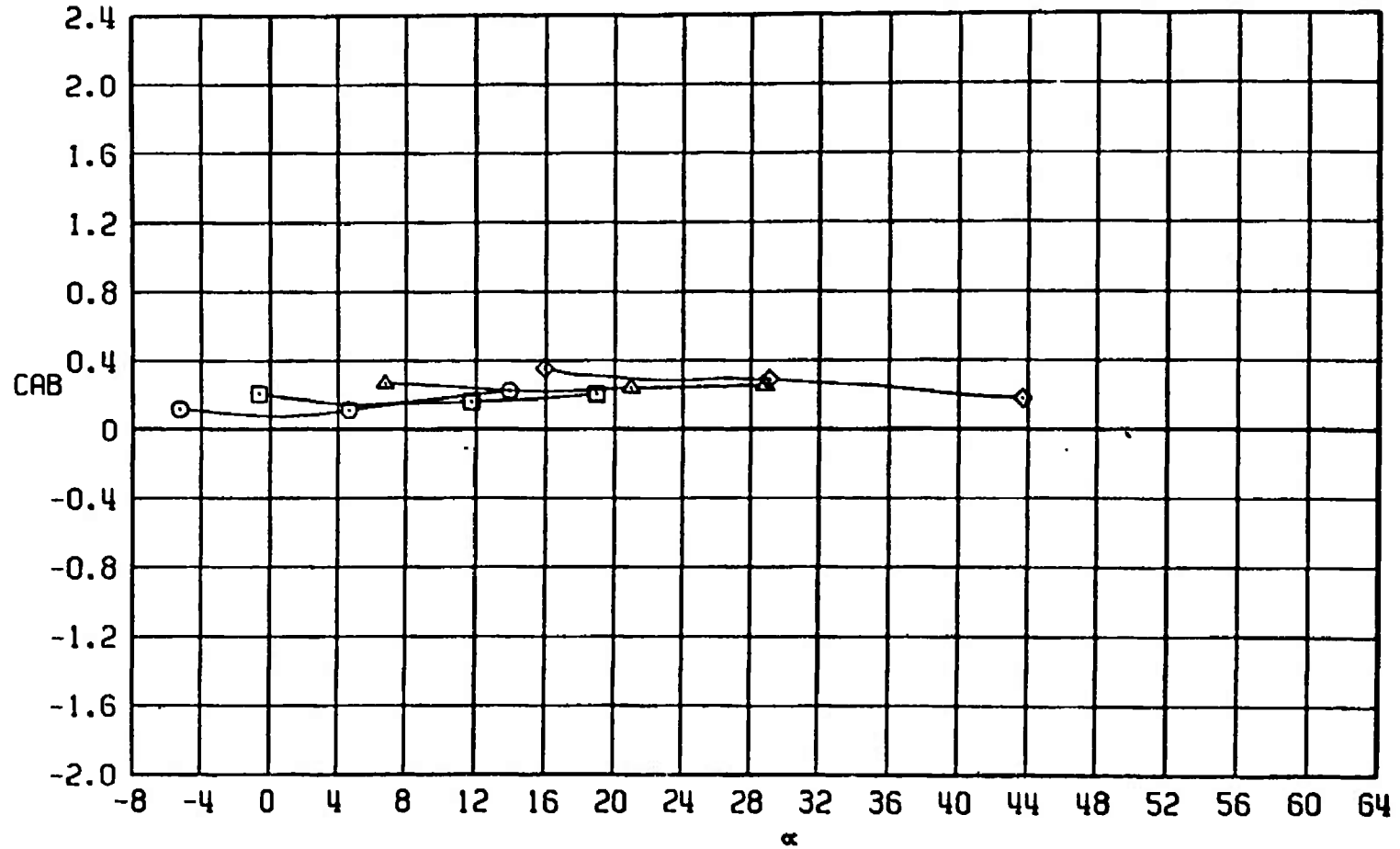
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	81WOF34	0	0	0	0	0	0
□	81WOF34	0	0	-10	0	-10	0
△	81WOF34	0	0	-20	0	-20	0
◇	81WOF34	0	0	-30	0	-30	0



c. CA versus α
Figure 61. Continued.

TEST CENTER NSROC TEST 7

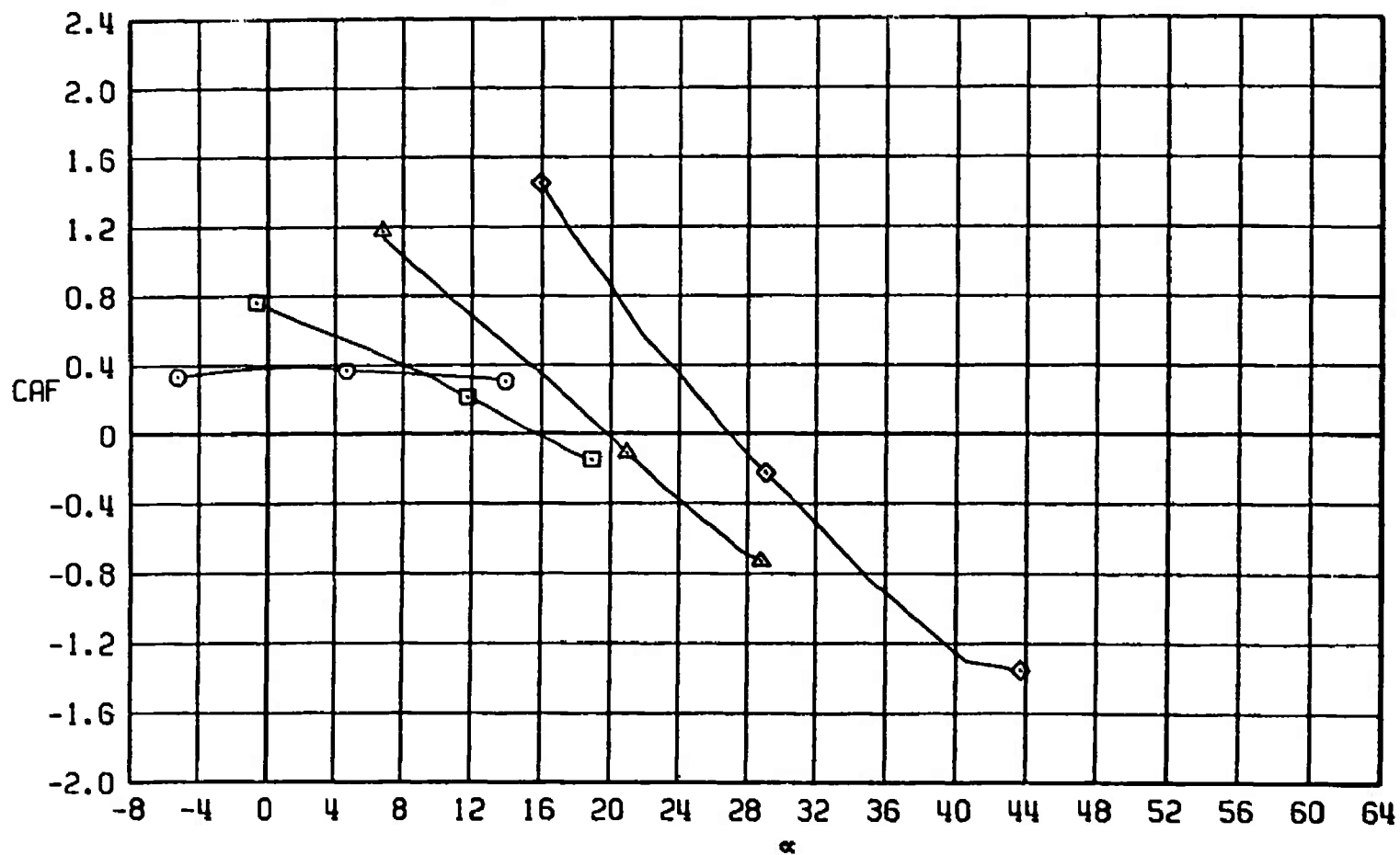
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF34	0	0	0	0	0	0
□	B1WOF34	0	0	-10	0	-10	0
△	B1WOF34	0	0	-20	0	-20	0
◇	B1WOF34	0	0	-30	0	-30	0



d. CAB versus α
Figure 61. Continued.

TEST CENTER NSRDC TEST 7

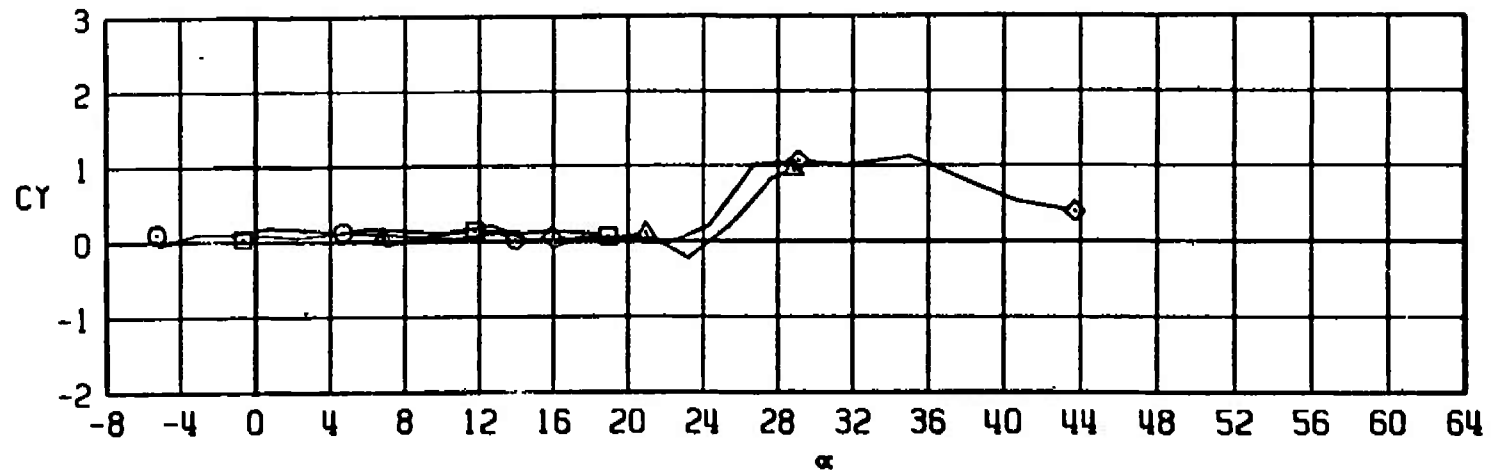
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



e. CAF versus α
Figure 61. Continued.

TEST CENTER NSRDC TEST 7

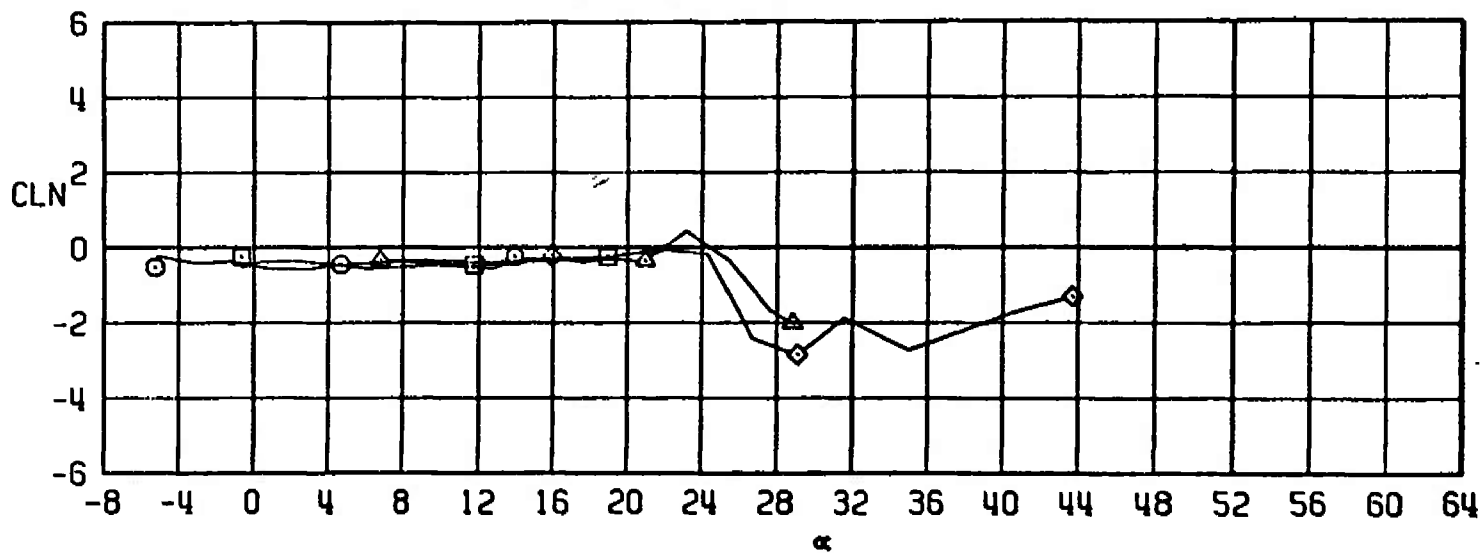
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF34	0	0	0	0	0	0
⊠	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



f. CY versus α
Figure 61. Continued.

TEST CENTER NSROC TEST 7

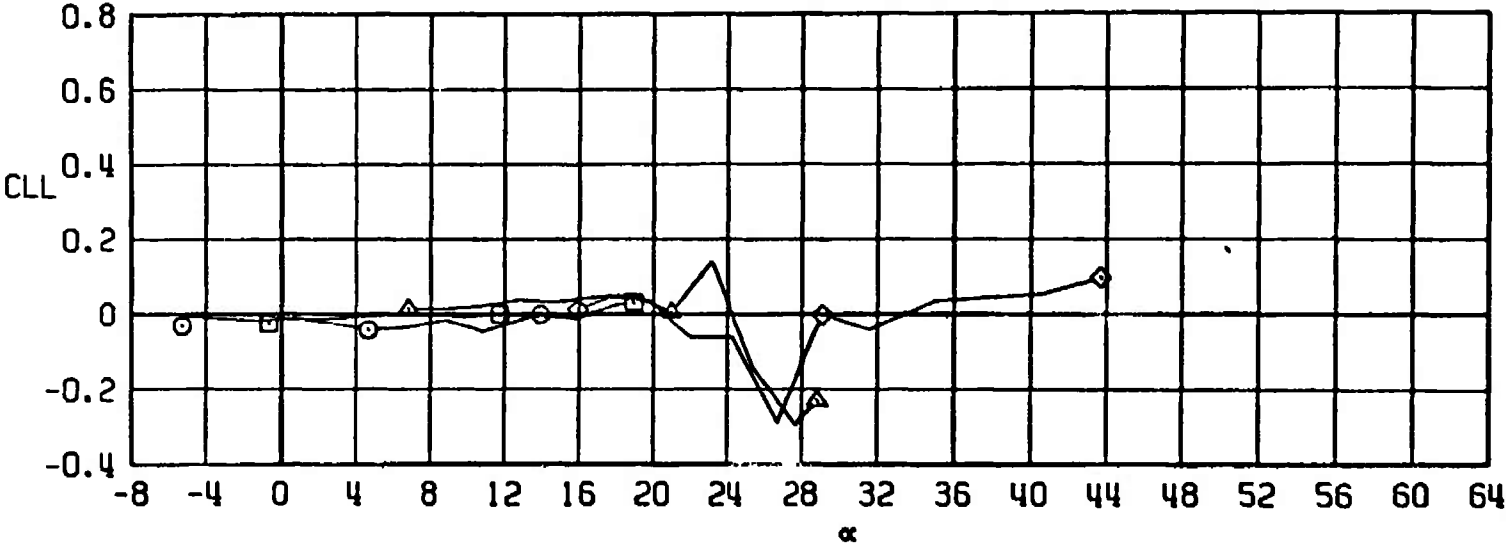
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF34	0	0	0	0	0	0
□	B1WOF34	0	0	-10	0	-10	0
△	B1WOF34	0	0	-20	0	-20	0
◇	B1WOF34	0	0	-30	0	-30	0



g. CLN versus α
Figure 61. Continued.

TEST CENTER NSRDC TEST 7

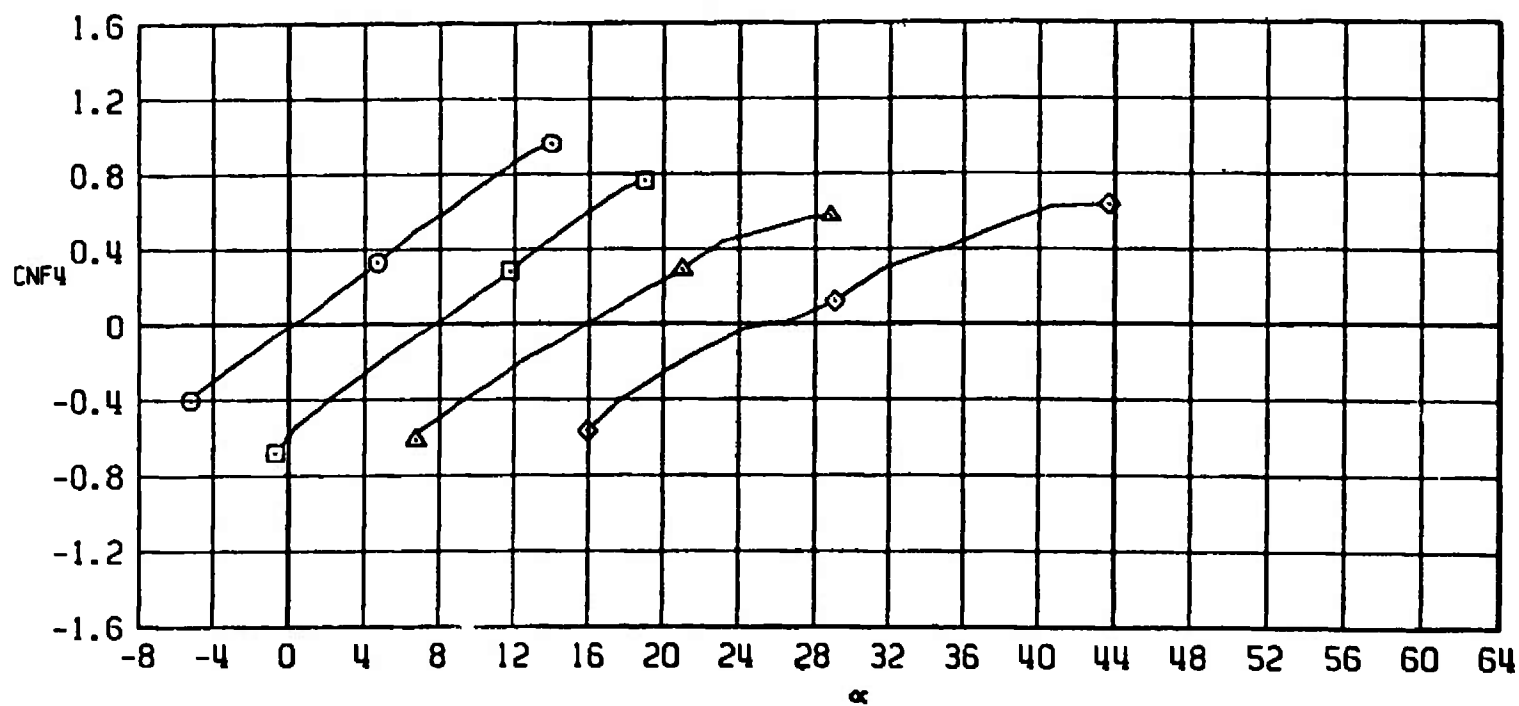
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



h. CLL versus α
Figure 61. Continued.

TEST CENTER NSRDC TEST 7

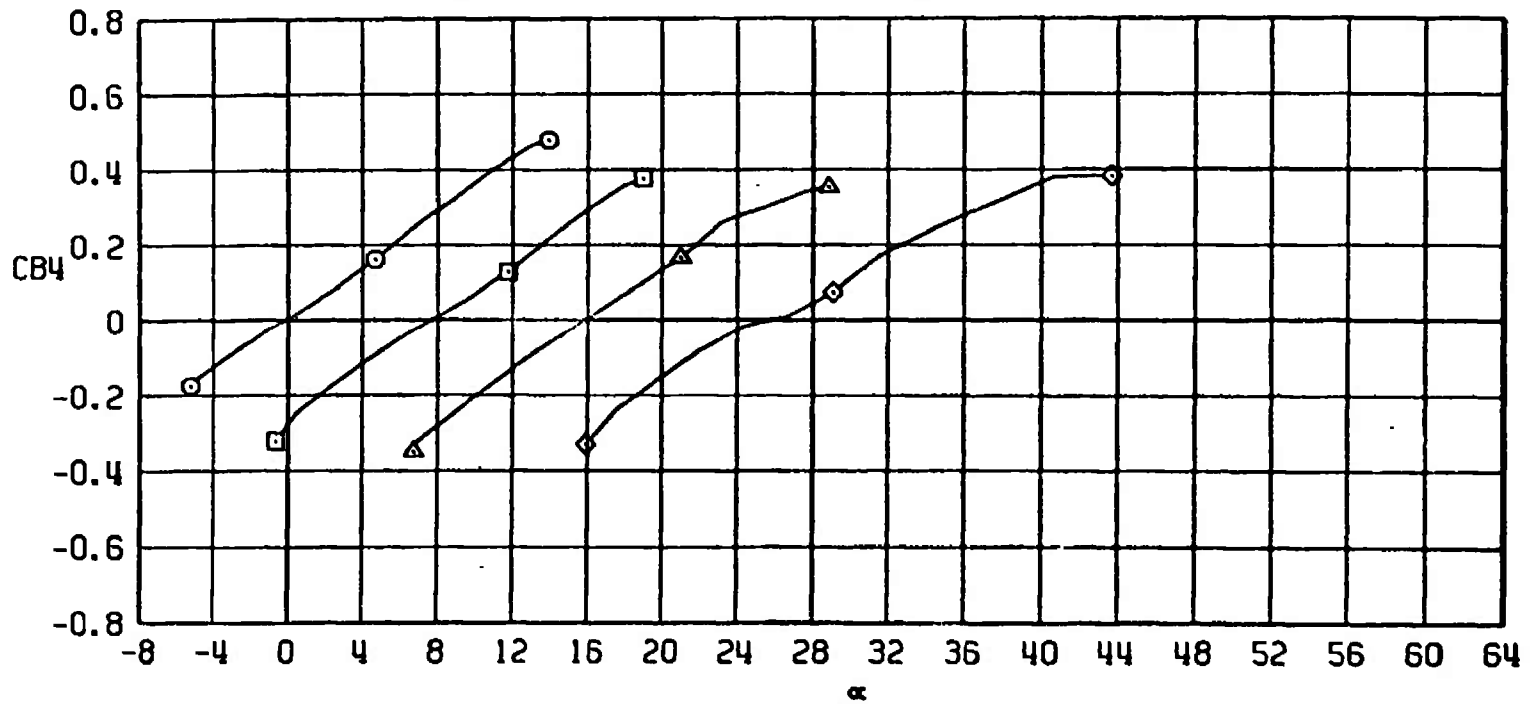
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 61. Continued.

TEST CENTER NSRDC TEST 7

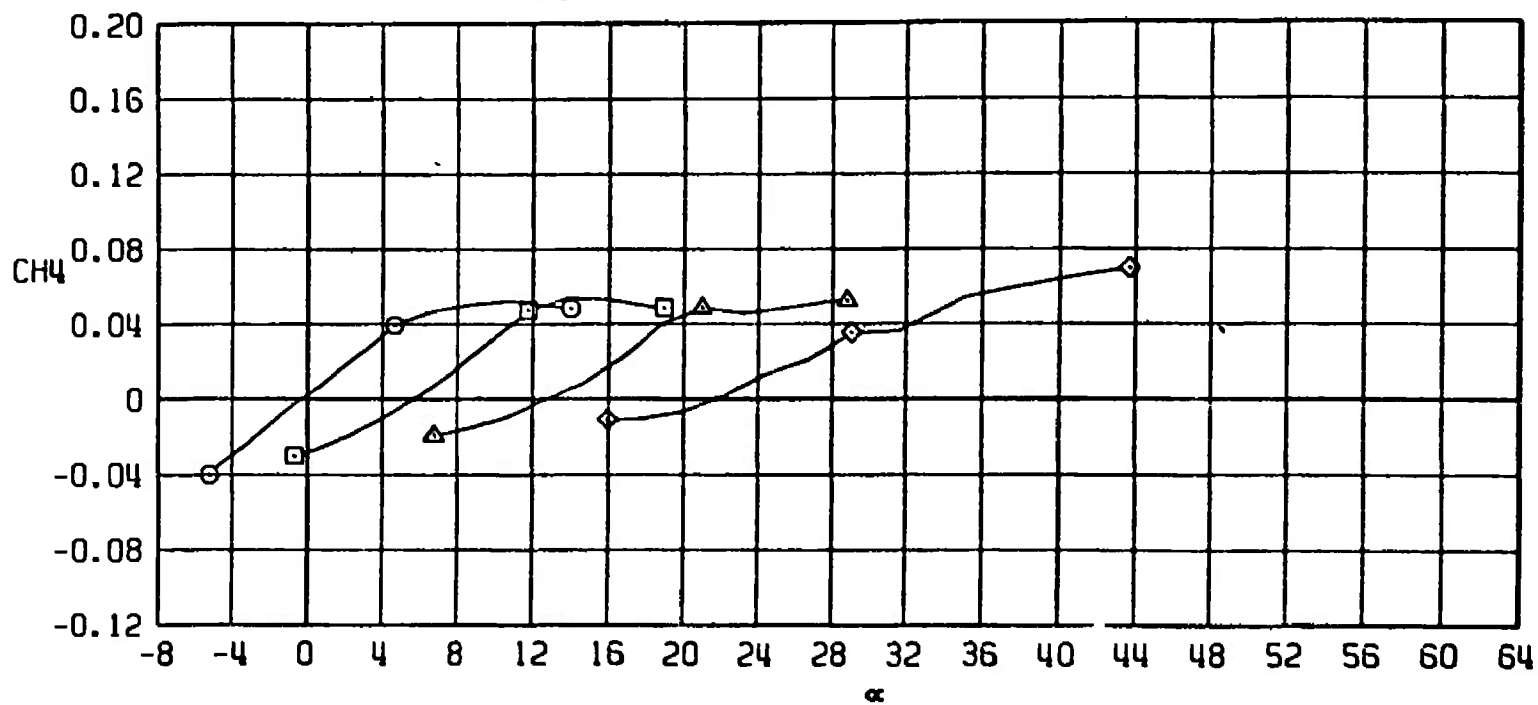
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



j. CB4 versus α
Figure 61. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 61. Concluded.

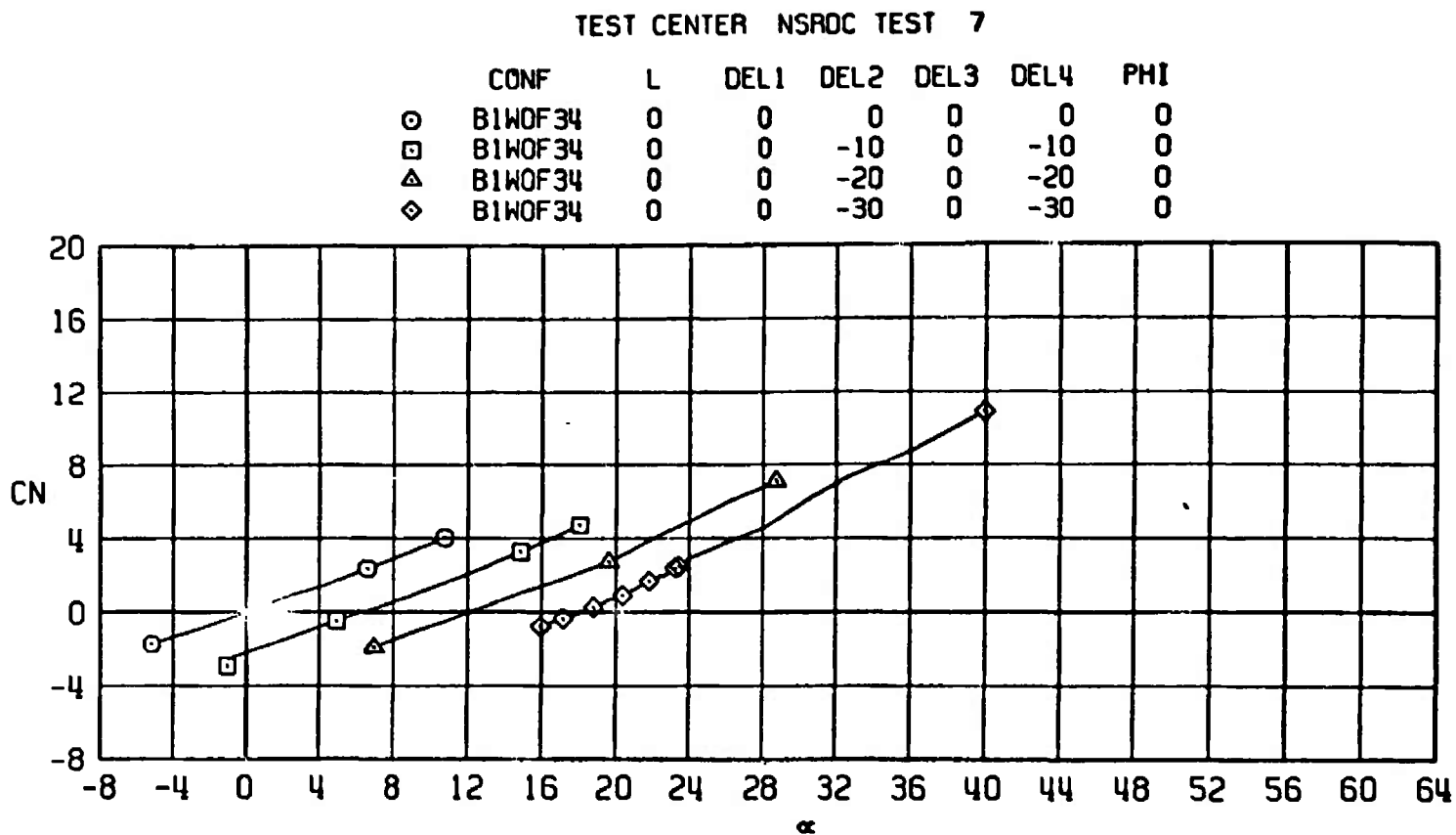
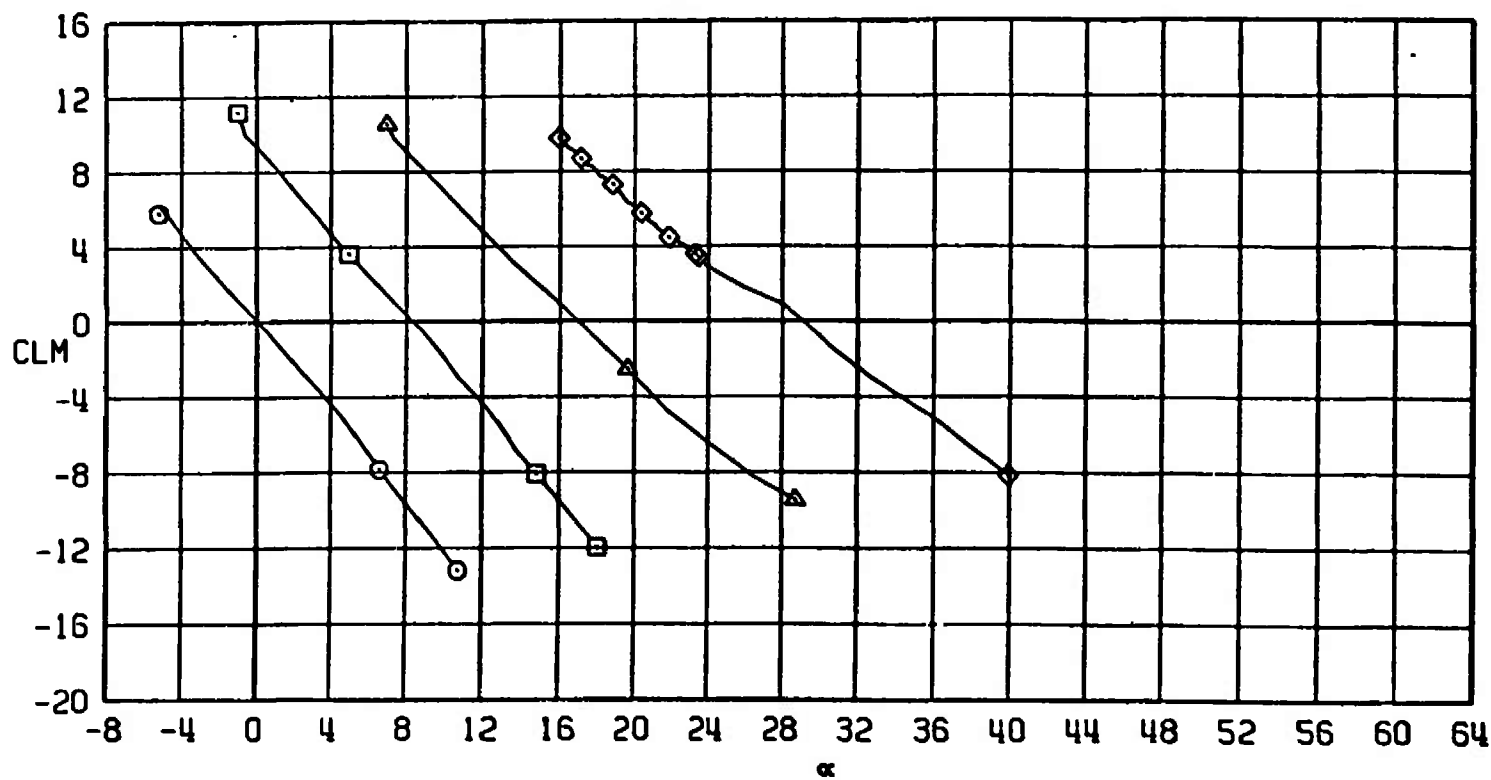
a. CN versus α

Figure 62. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F34 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.0$.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0

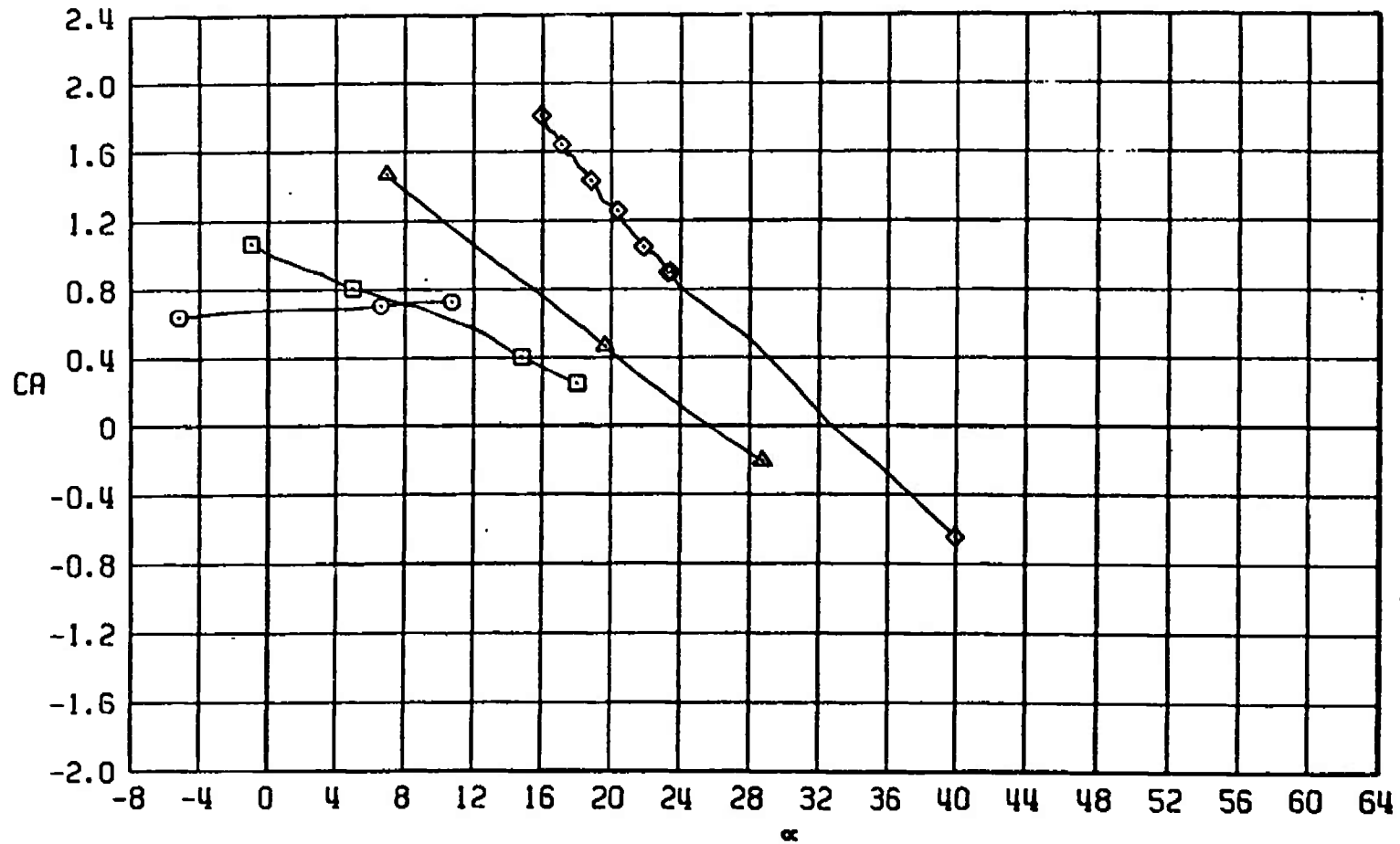


b. CLM versus α

Figure 62. Continued.

TEST CENTER NSRDC TEST 7

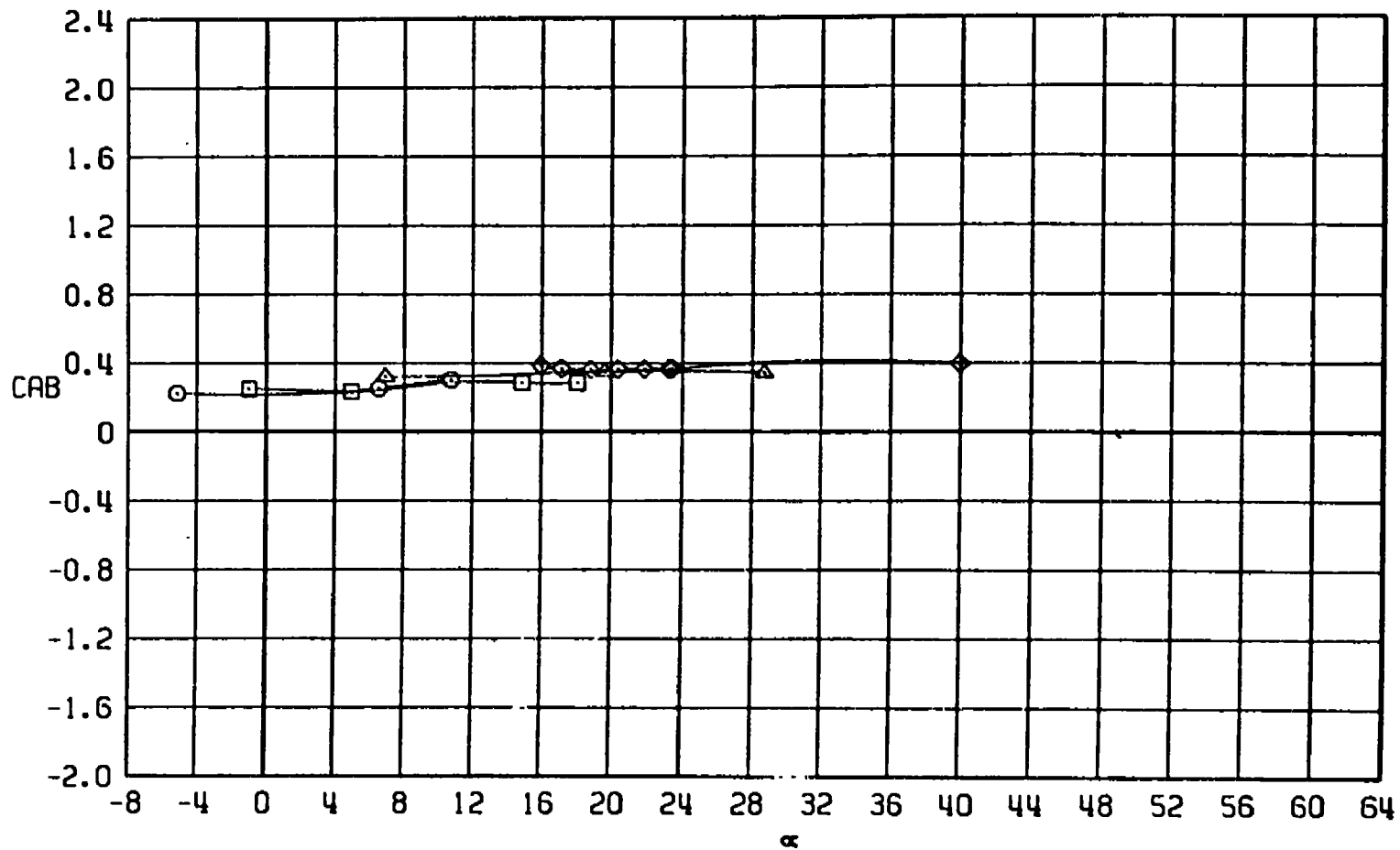
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF34	0	0	0	0	0	0
□	B1WOF34	0	0	-10	0	-10	0
△	B1WOF34	0	0	-20	0	-20	0
◇	B1WOF34	0	0	-30	0	-30	0



c. CA versus α
Figure 62. Continued.

TEST CENTER NSRDC TEST 7

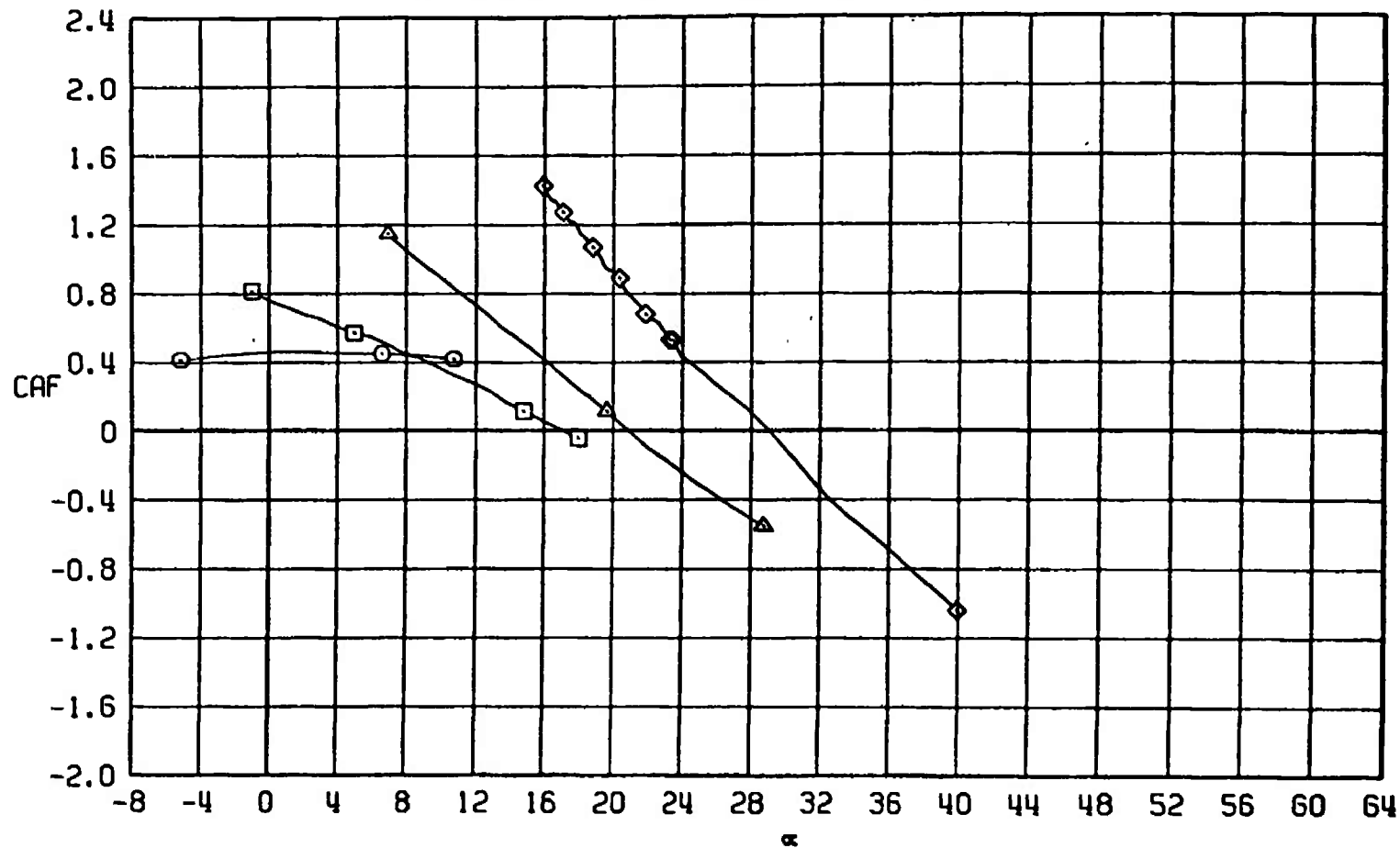
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF34	0	0	0	0	0	0
□	B1WOF34	0	0	-10	0	-10	0
△	B1WOF34	0	0	-20	0	-20	0
◇	B1WOF34	0	0	-30	0	-30	0



d. CAB versus α
Figure 62. Continued.

TEST CENTER NSRDC TEST 7

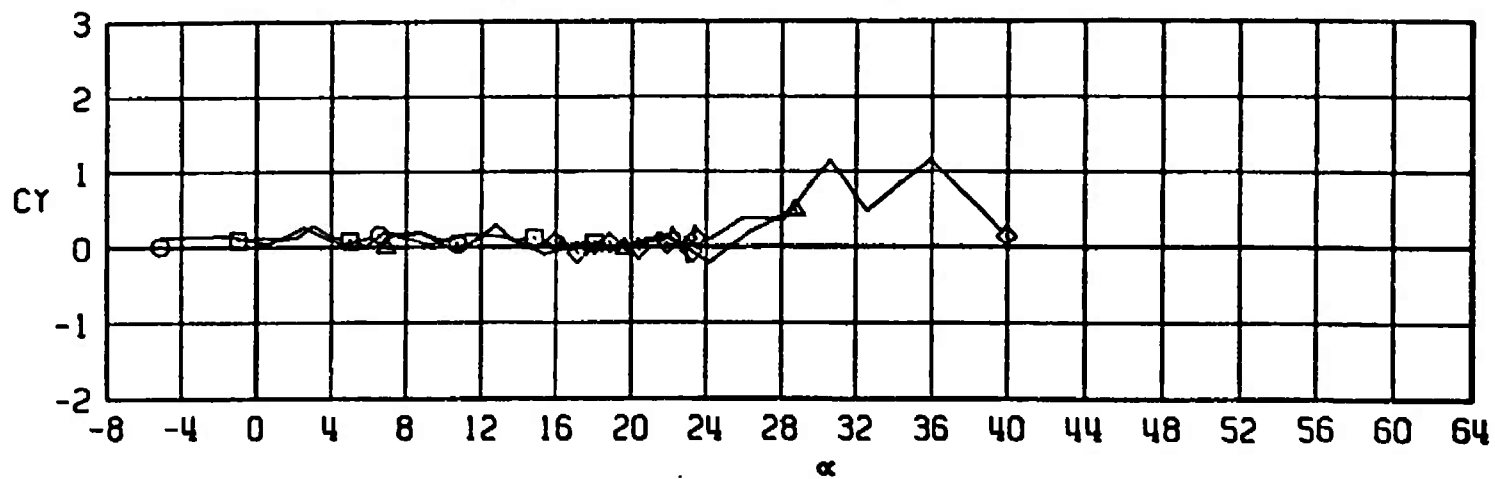
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



e. CAF versus α
Figure 62. Continued.

TEST CENTER NSRDC TEST 7

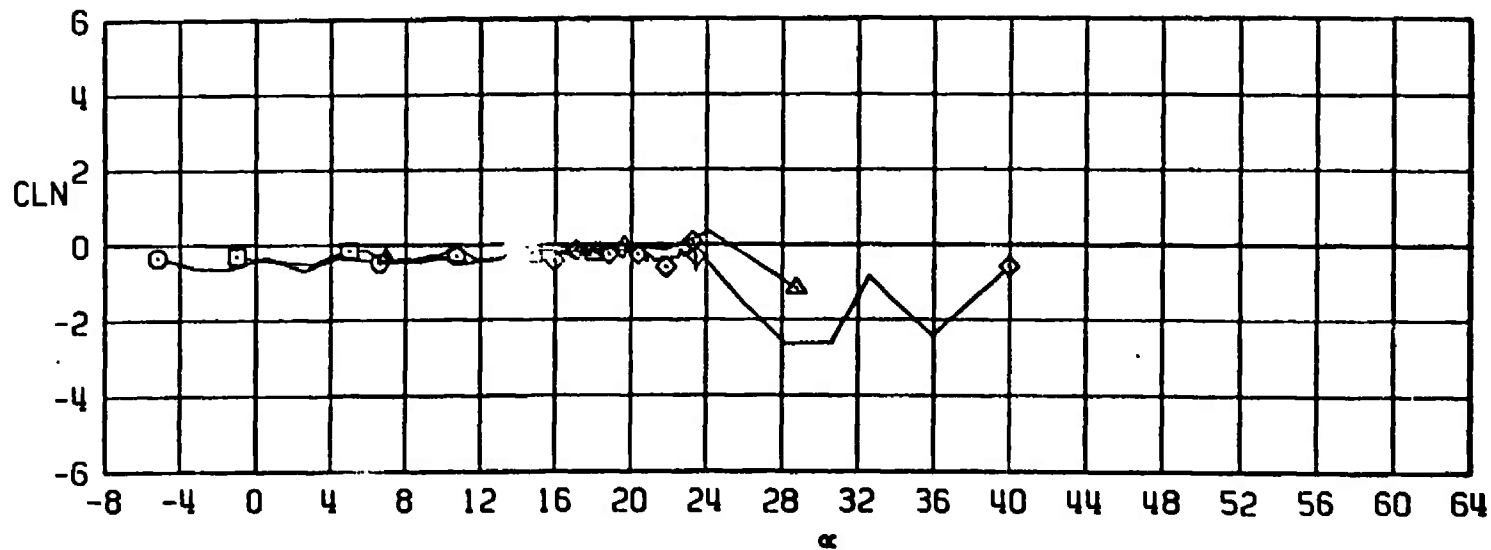
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



f. CY versus α
Figure 62. Continued.

TEST CENTER NSRDC TEST 7

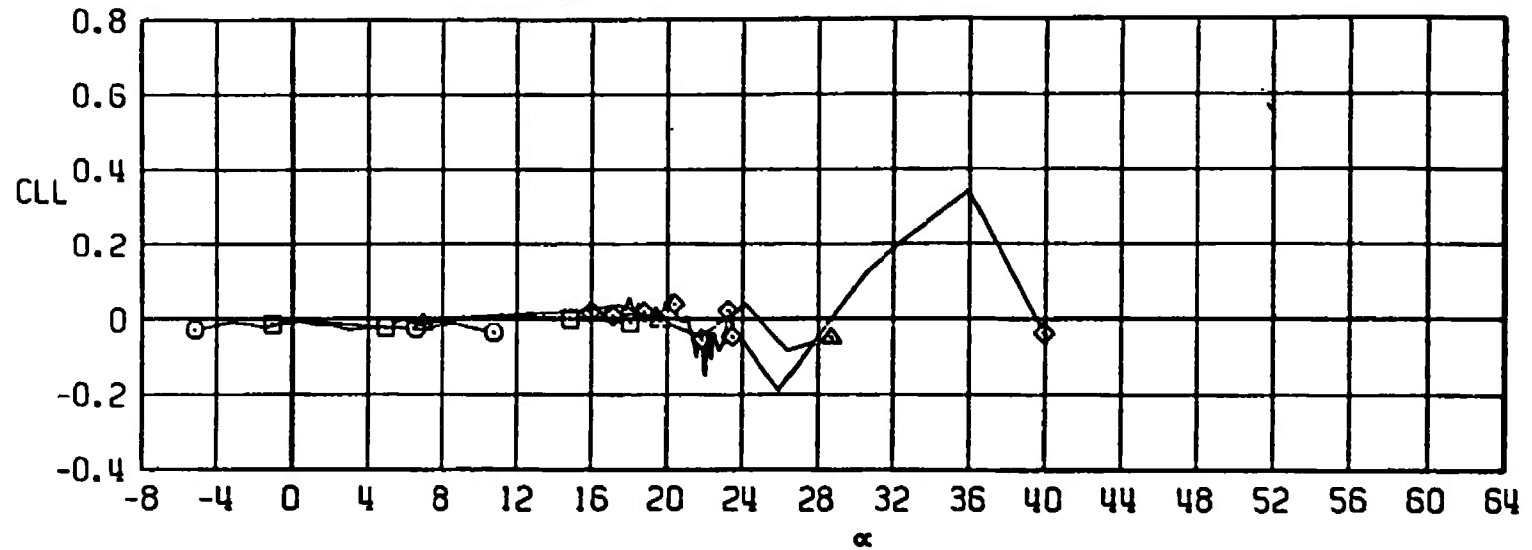
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



g. CLN versus α
Figure 62. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



h. CLL versus α
Figure 62. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0

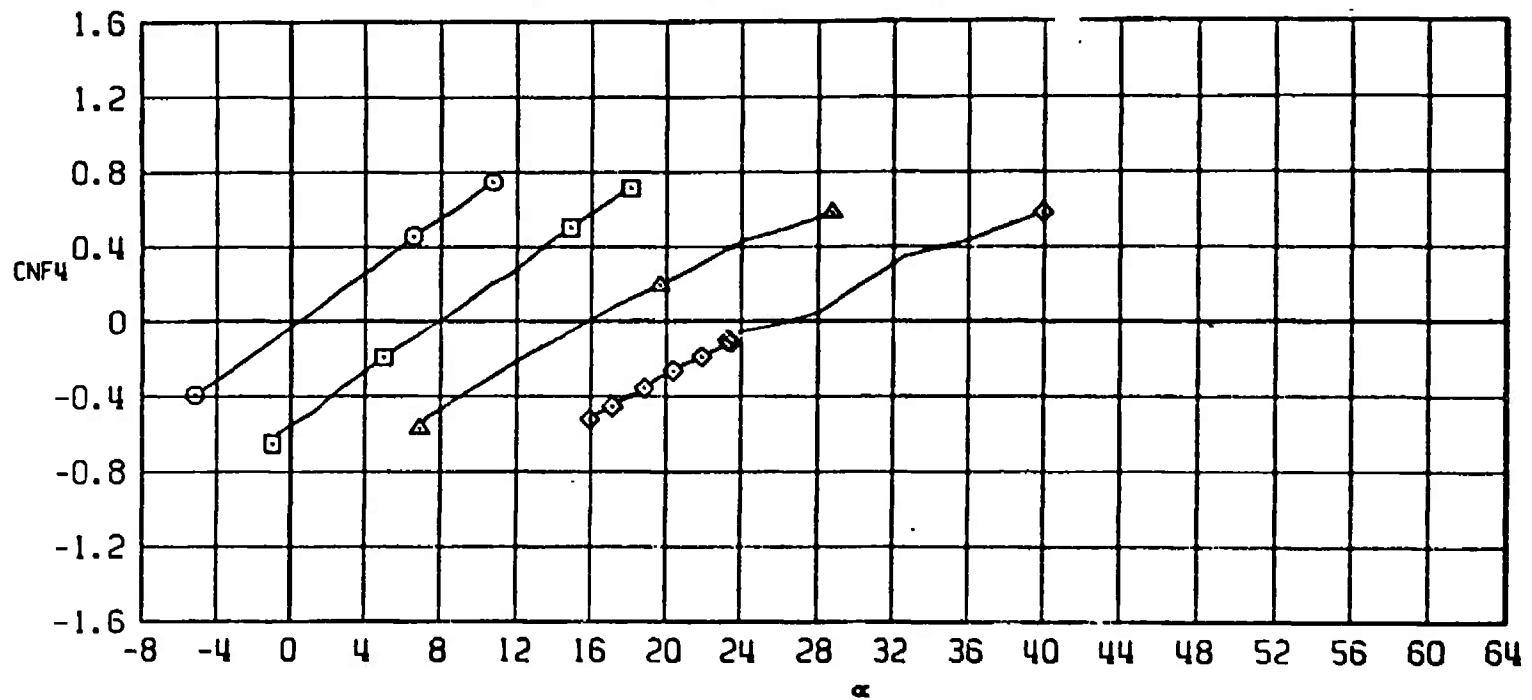
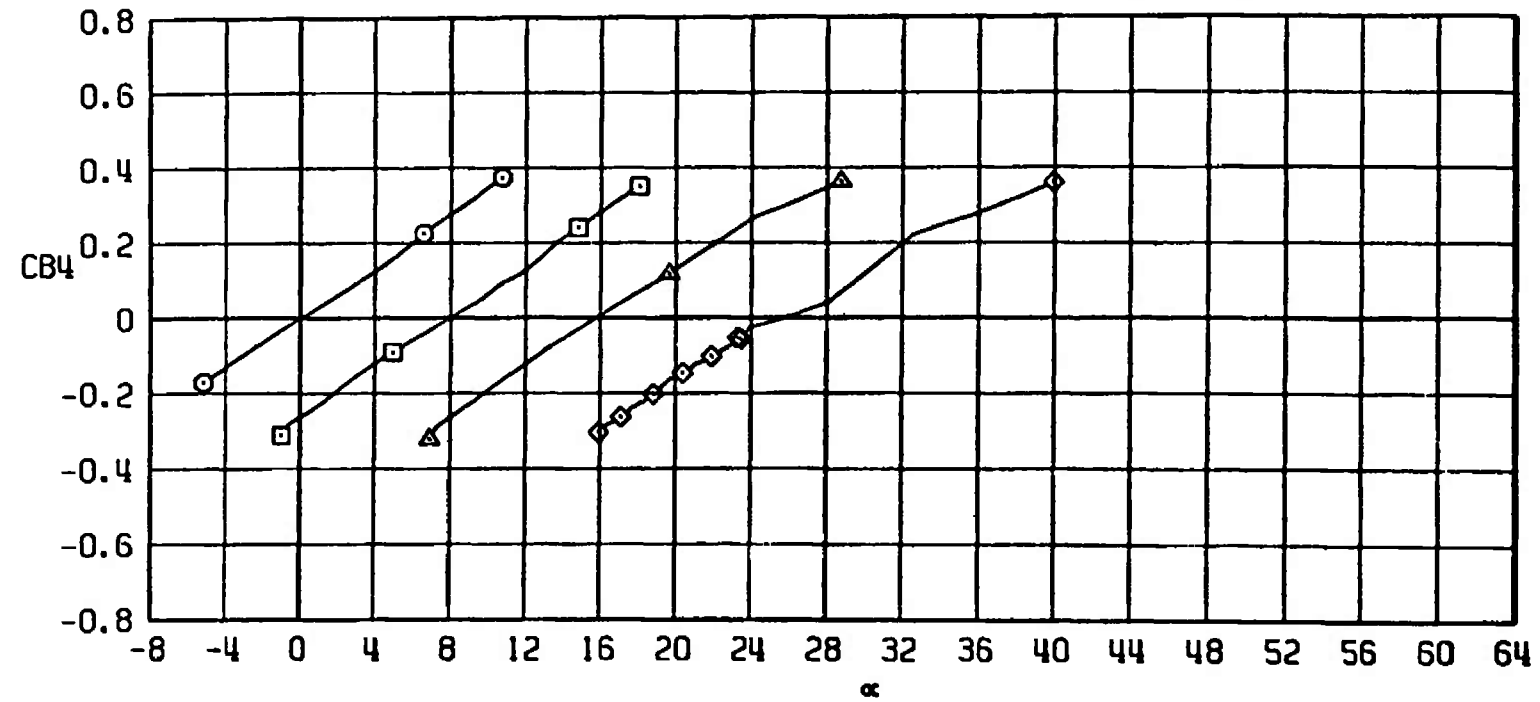
i. CNF4 versus α

Figure 62. Continued.

TEST CENTER NSROC TEST 7

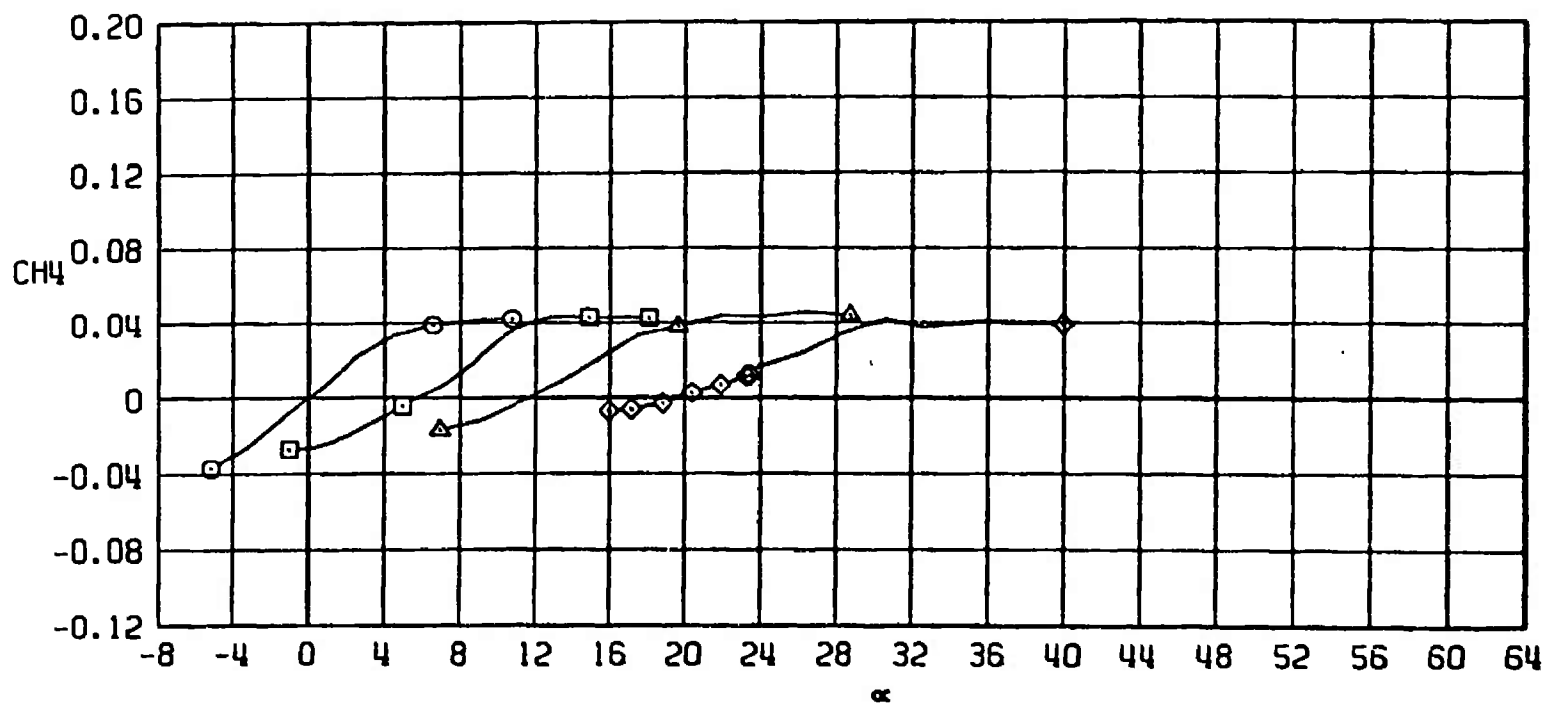
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



j. CB4 versus α
Figure 62. Continued.

TEST CENTER NSROC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF34	0	0	0	0	0	0
□	BIWOF34	0	0	-10	0	-10	0
△	BIWOF34	0	0	-20	0	-20	0
◇	BIWOF34	0	0	-30	0	-30	0



k. CH4 versus α
Figure 62. Concluded.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F13	0	0	0	0	0	0
□	B1W0F13	0	0	-10	0	-10	0
△	B1W0F13	0	0	-20	0	-20	0
◇	B1W0F13	0	0	-30	0	-30	0

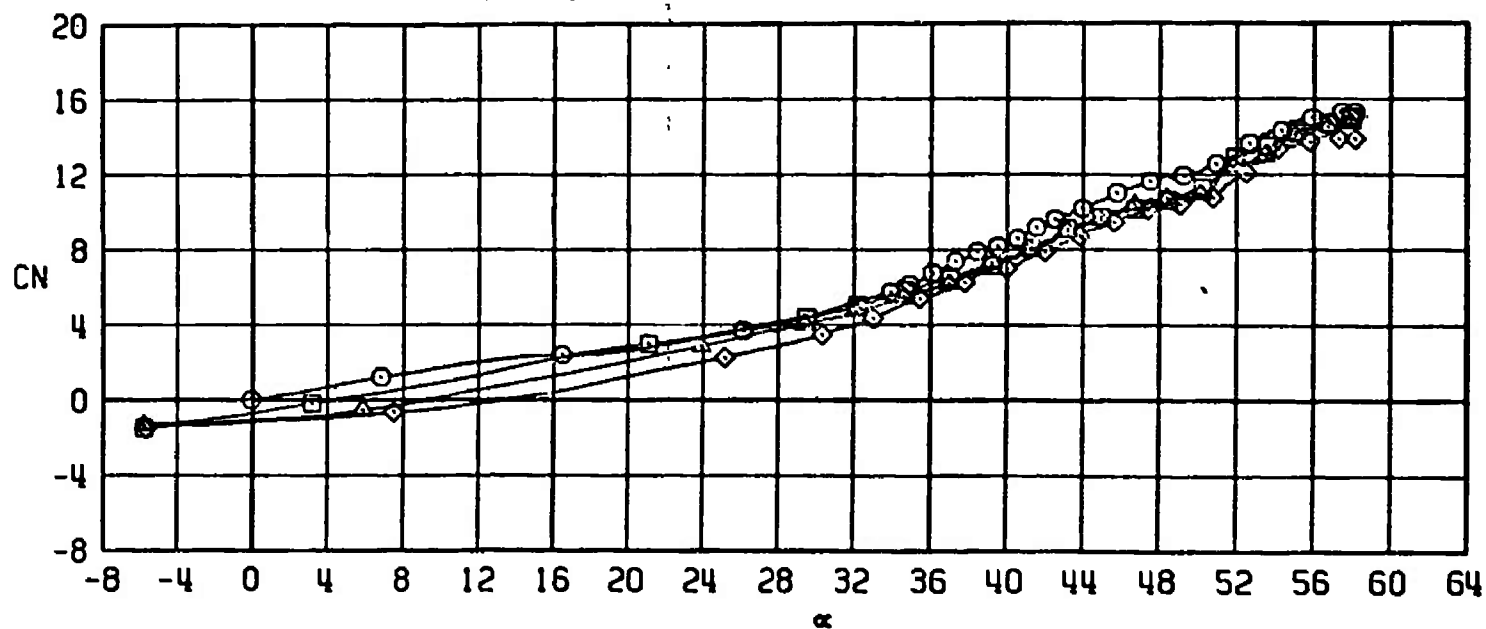
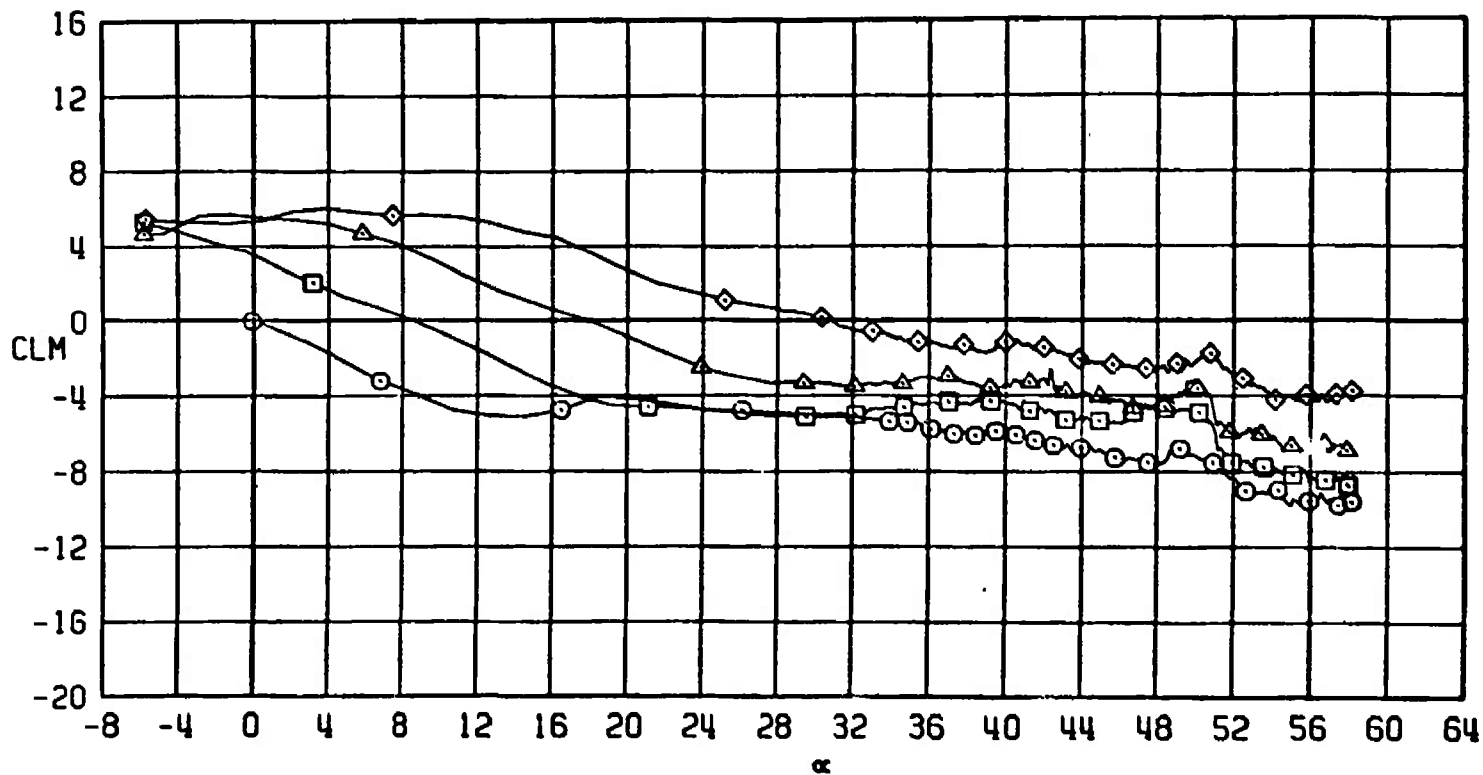
a. C_N versus α

Figure 63. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F13 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.8$.

TEST CENTER NSROC TEST 7

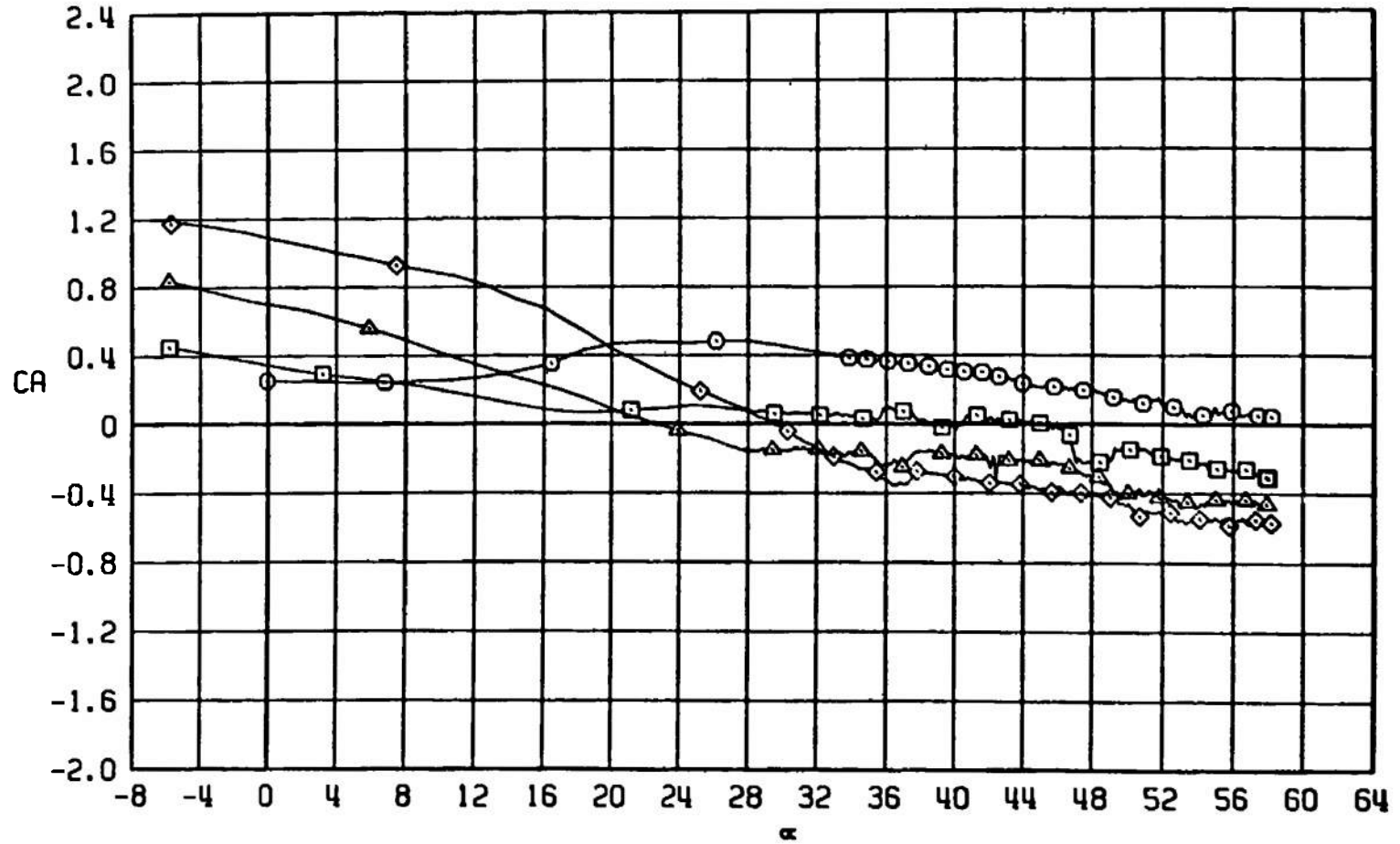
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



b. CLM versus α
Figure 63. Continued.

TEST CENTER NSRDC TEST 7

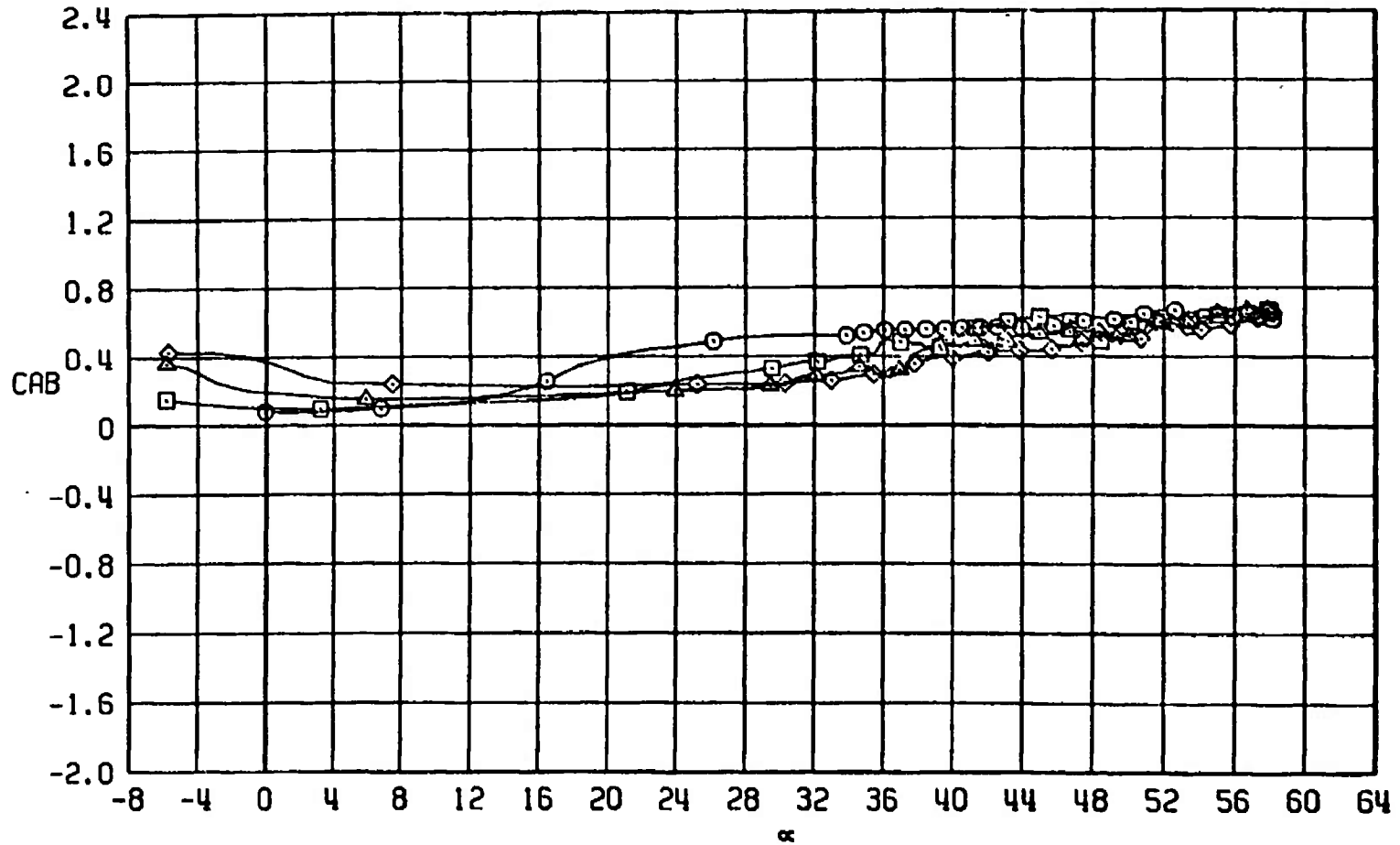
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



c. CA versus α
Figure 63. Continued.

TEST CENTER NSROC TEST 7

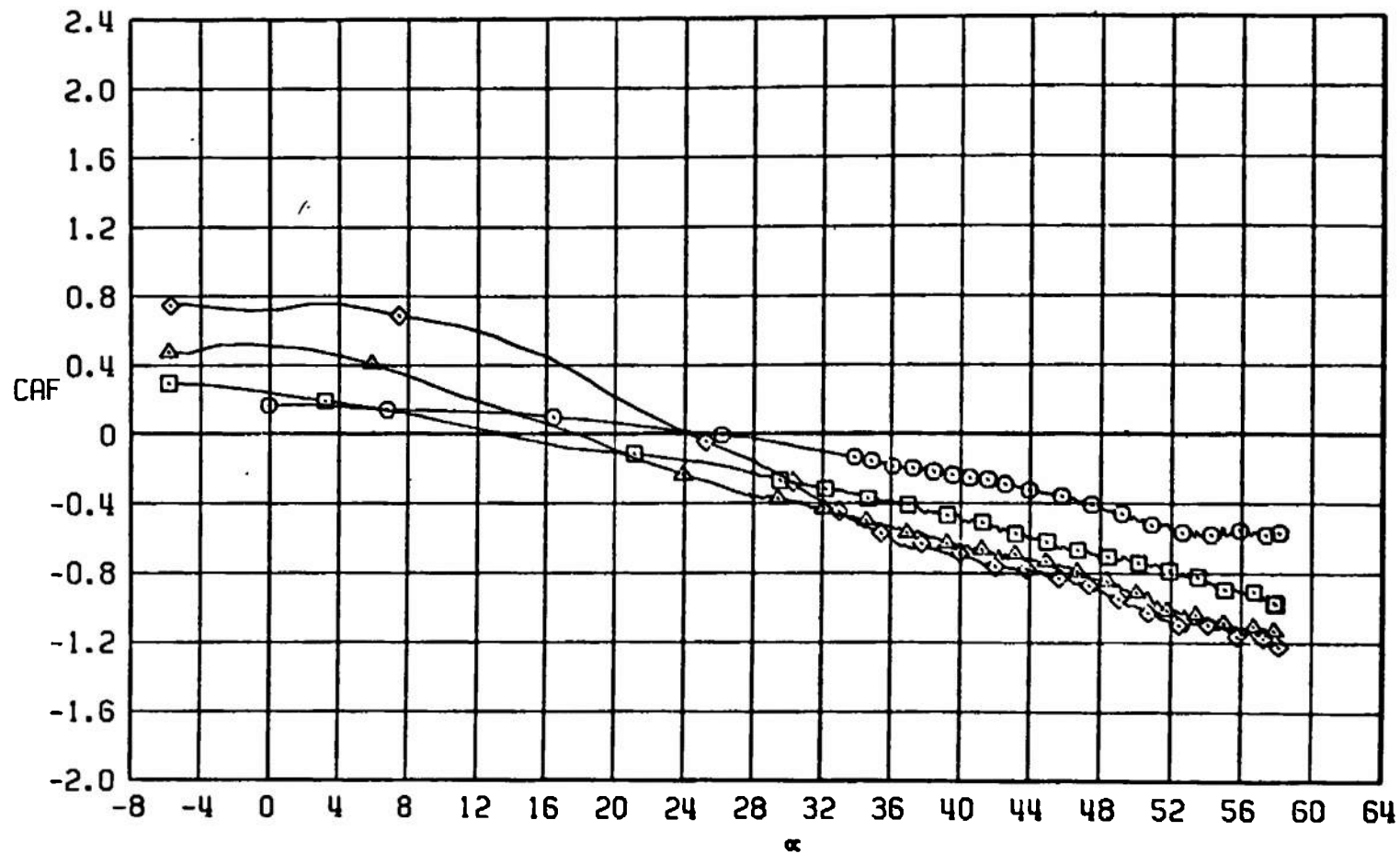
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



d. CAB versus α
Figure 63. Continued.

TEST CENTER NSRDC TEST 7

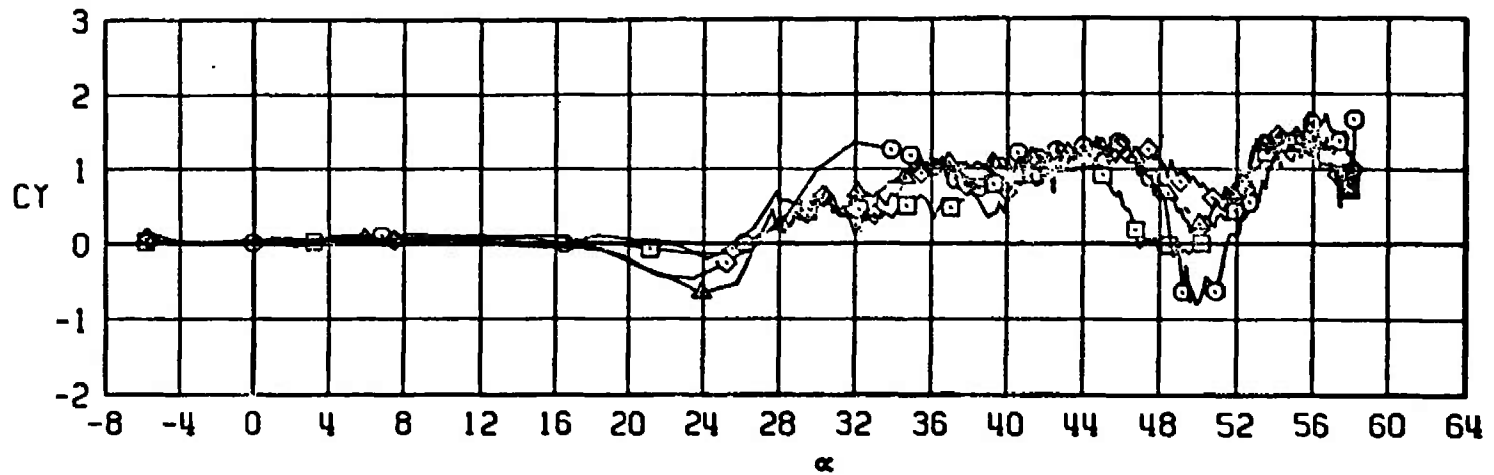
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



e. CAF versus α
Figure 63. Continued.

TEST CENTER NSRDC TEST 7

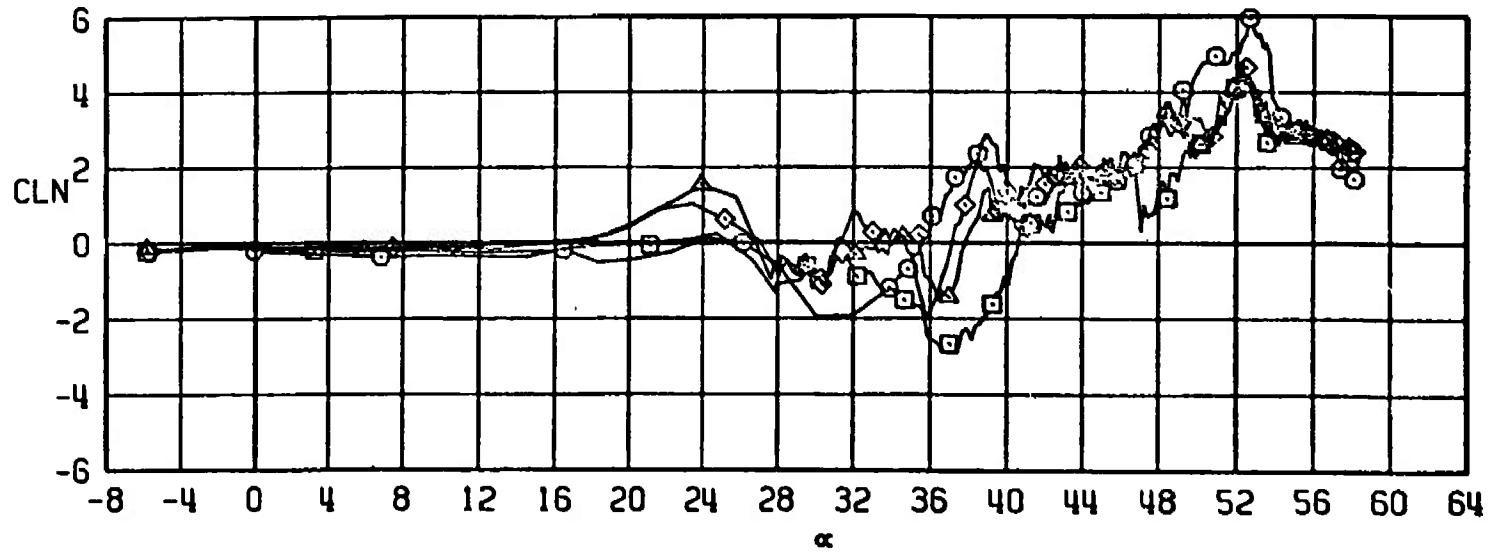
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



f. CY versus α
Figure 63. Continued.

TEST CENTER NSRDC TEST 7

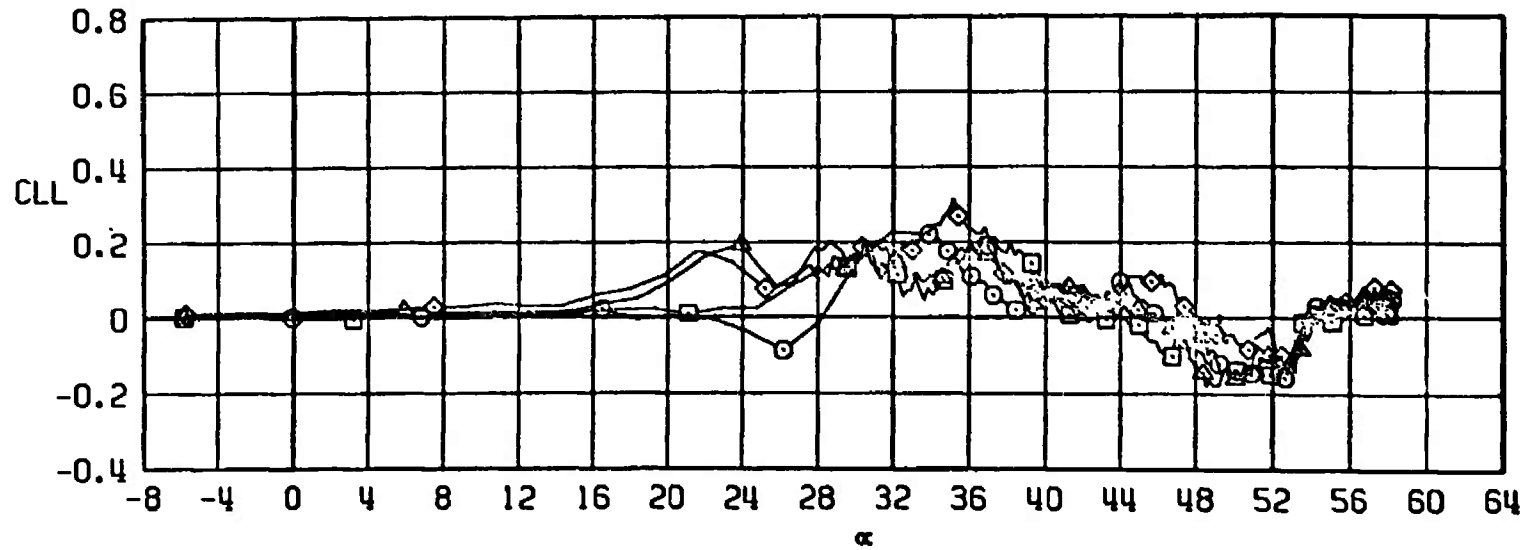
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



g. CLN versus α
Figure 63. Continued.

TEST CENTER NSRDC TEST 7

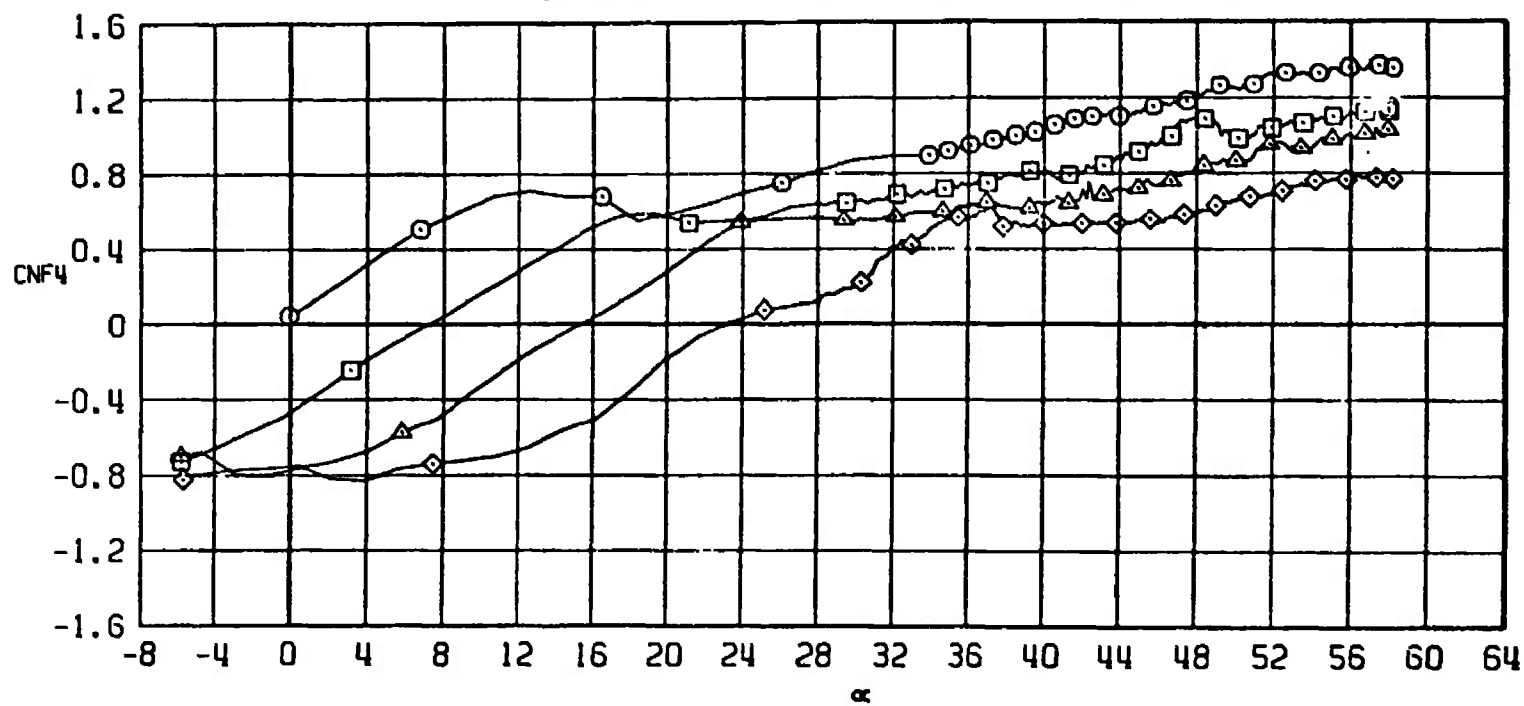
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



h. CLL versus α
Figure 63. Continued.

TEST CENTER NSRDC TEST 7

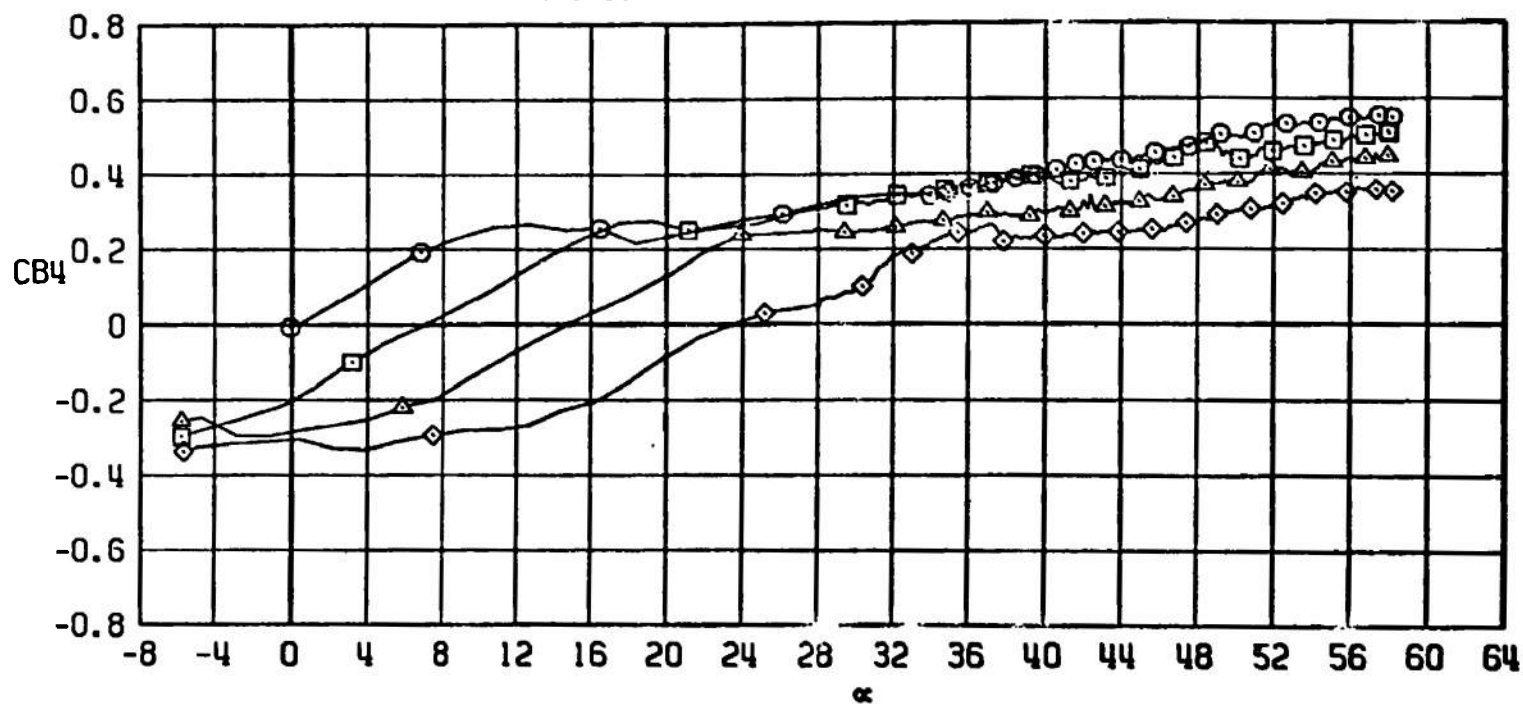
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 63. Continued.

TEST CENTER NSRDC TEST 7

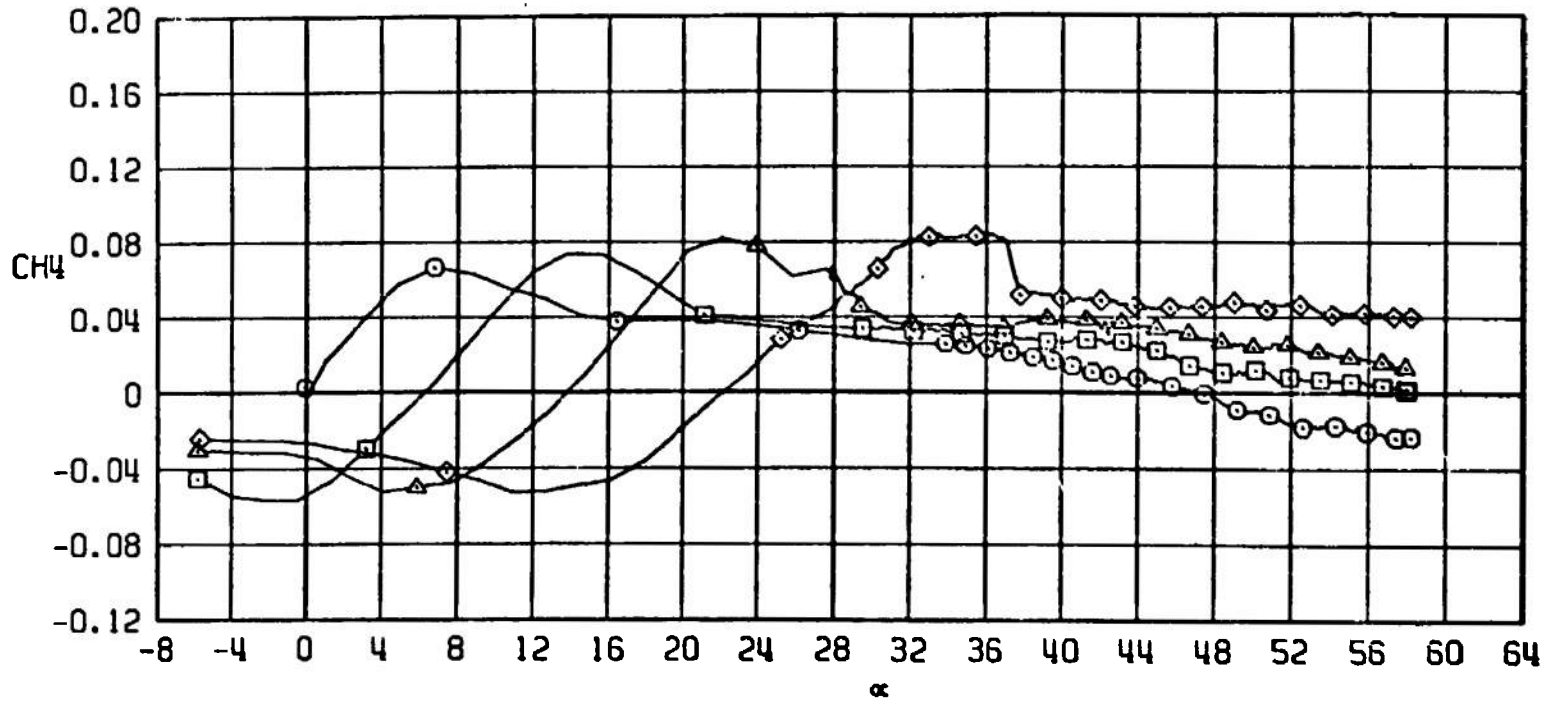
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



j. CB4 versus α
Figure 63. Continued.

TEST CENTER NSRDC TEST 7

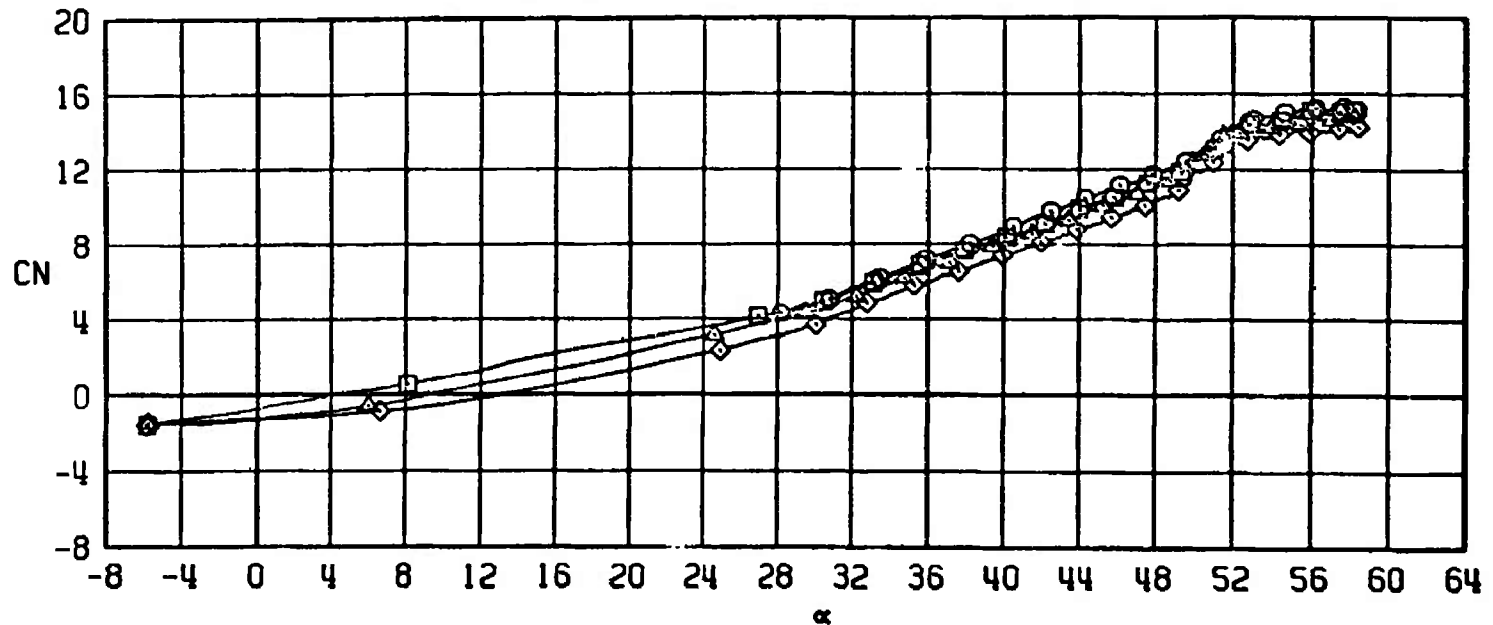
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 63. Concluded.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF13	0	0	0	0	0	0
□	B1WOF13	0	0	-10	0	-10	0
△	B1WOF13	0	0	-20	0	-20	0
◇	B1WOF13	0	0	-30	0	-30	0

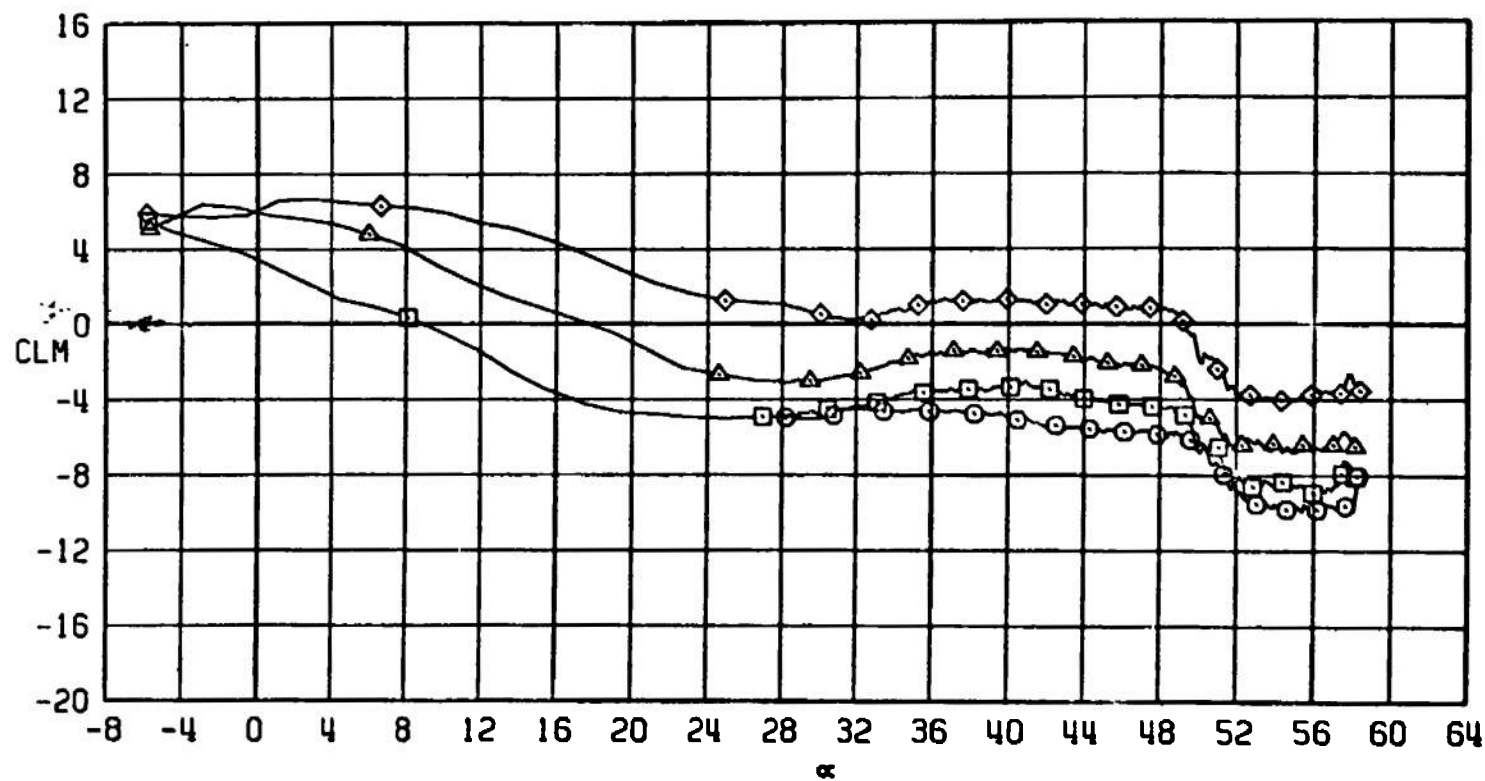


a. CN versus α

Figure 64. Test No. 7, comparison of aerodynamic coefficients of configuration B1WOF13 for various deflections of tail fins No. 2 and 4 at $M_\infty = 0.9$.

TEST CENTER NSROC TEST 7

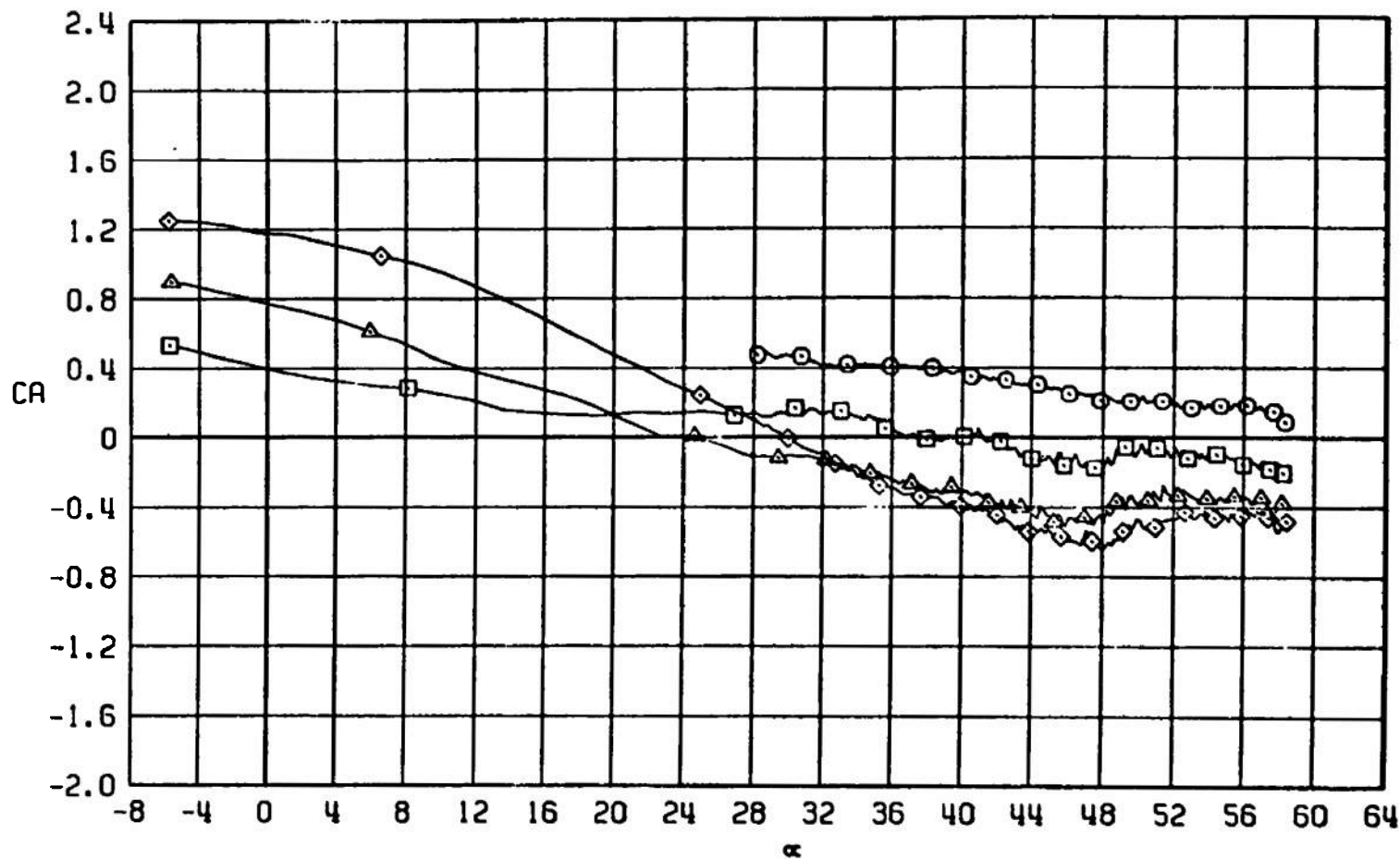
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



b. CLM versus α
Figure 64. Continued.

TEST CENTER NSROC TEST 7

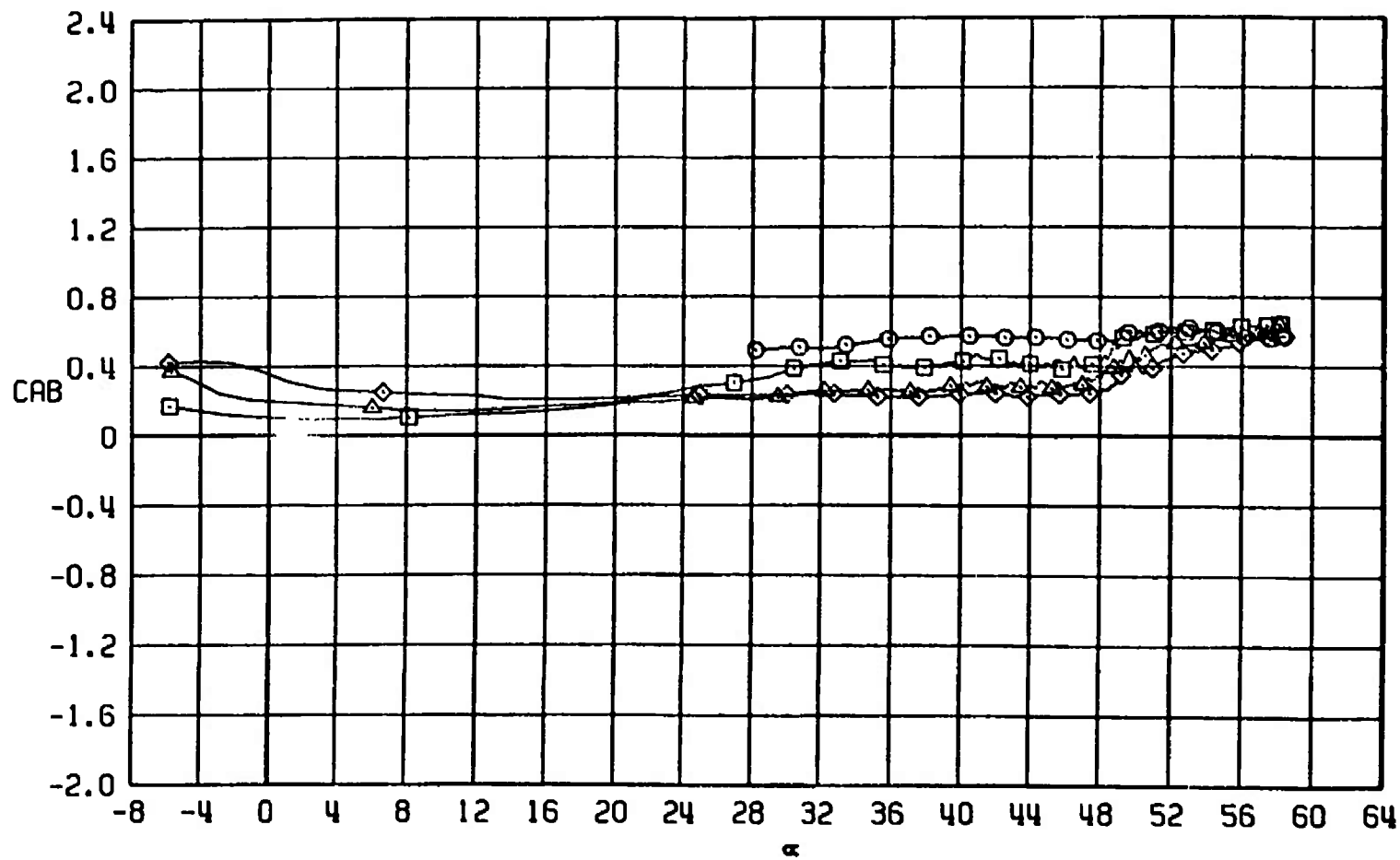
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



c. CA versus α
Figure 64. Continued.

TEST CENTER NSRDC TEST 7

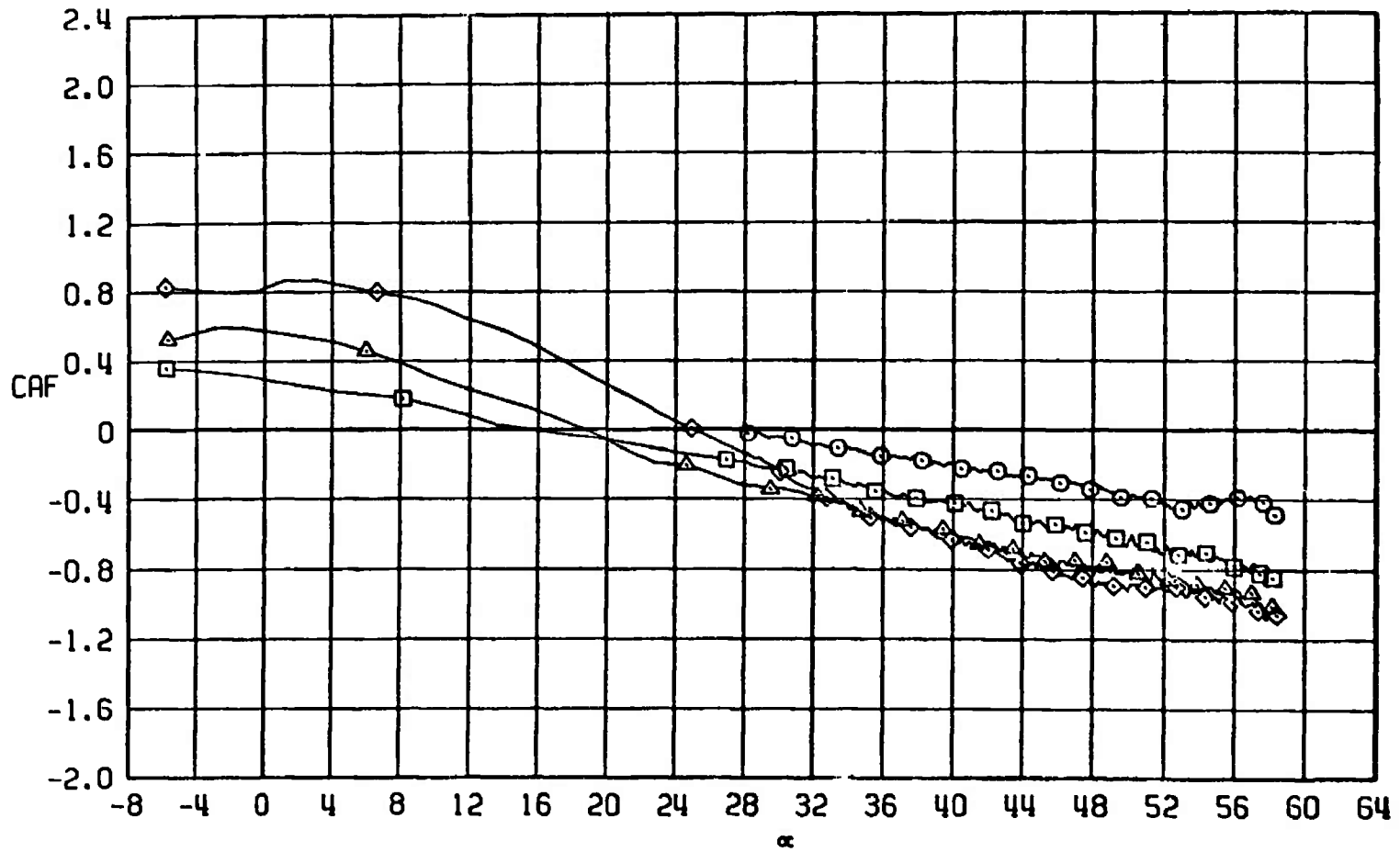
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



d. CAB versus α
Figure 64. Continued.

TEST CENTER NSRDC TEST 7

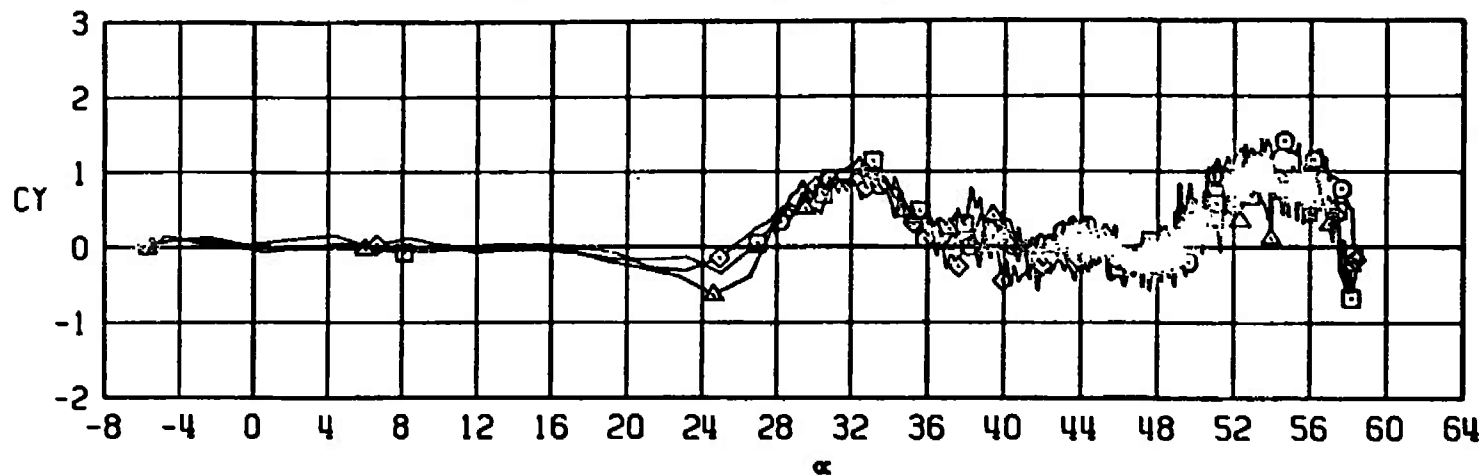
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



e. CAF versus α
Figure 64. Continued.

TEST CENTER NSRDC TEST 7

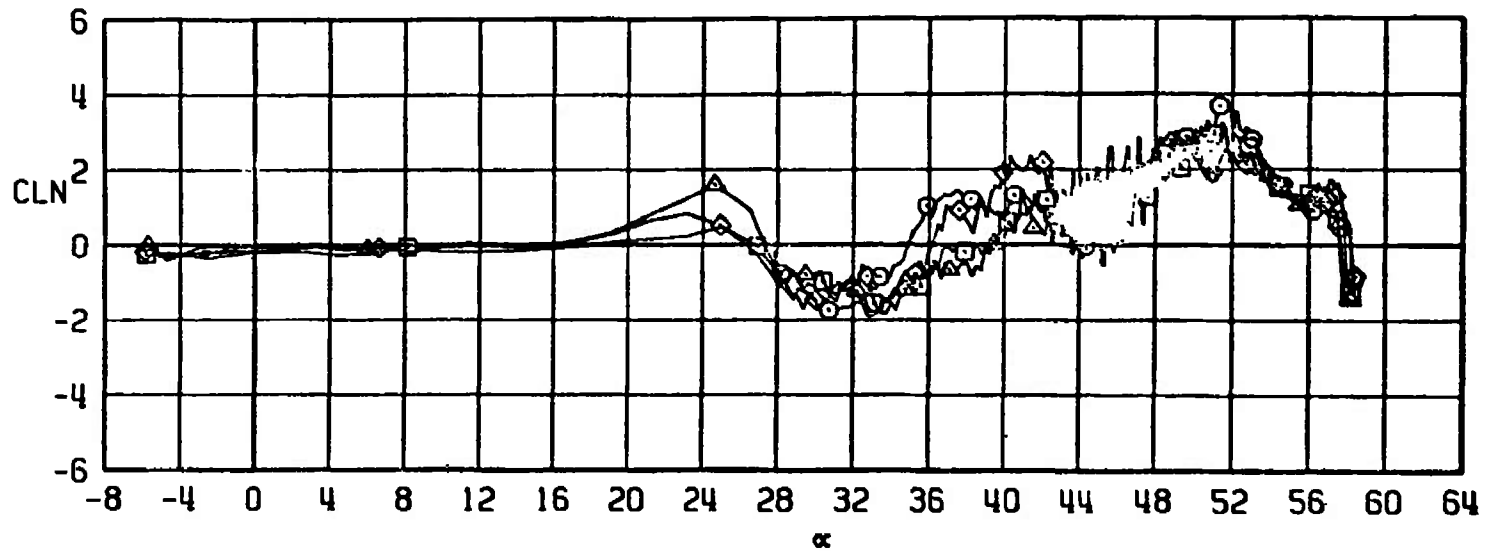
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF13	0	0	0	0	0	0
□	B1WOF13	0	0	-10	0	-10	0
△	B1WOF13	0	0	-20	0	-20	0
◇	B1WOF13	0	0	-30	0	-30	0



f. CY versus α
Figure 64. Continued.

TEST CENTER NSRDC TEST 7

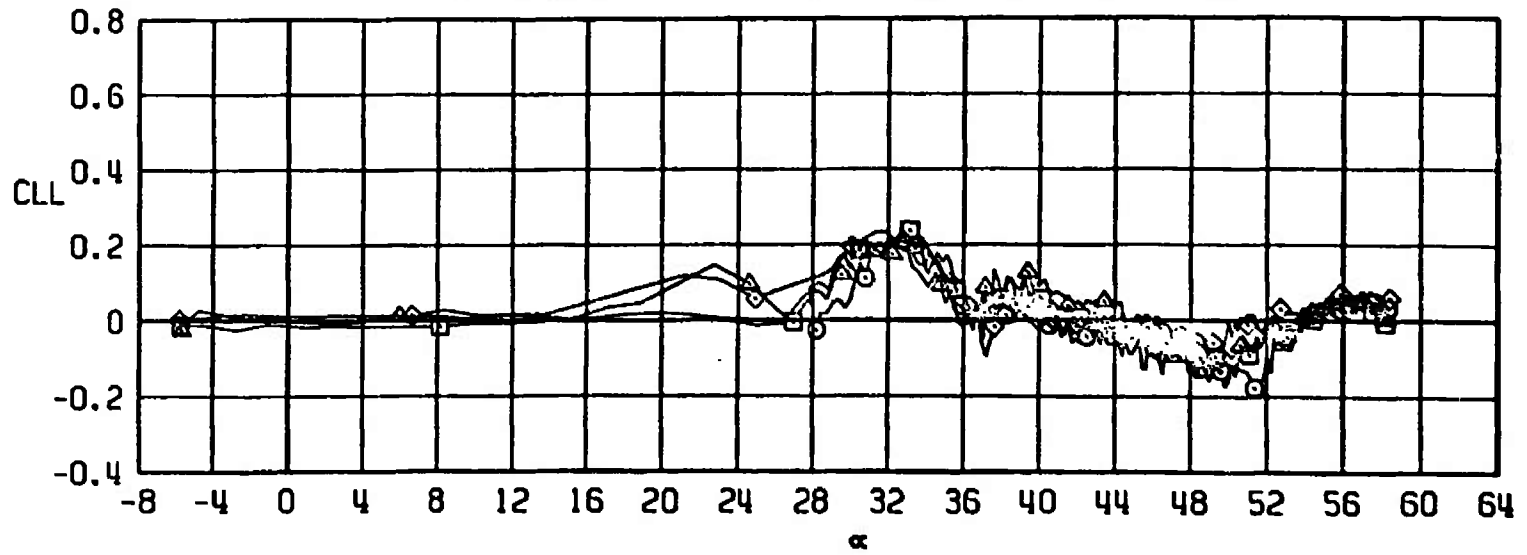
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



g. CLN versus α
Figure 64. Continued.

TEST CENTER NSRDC TEST 7

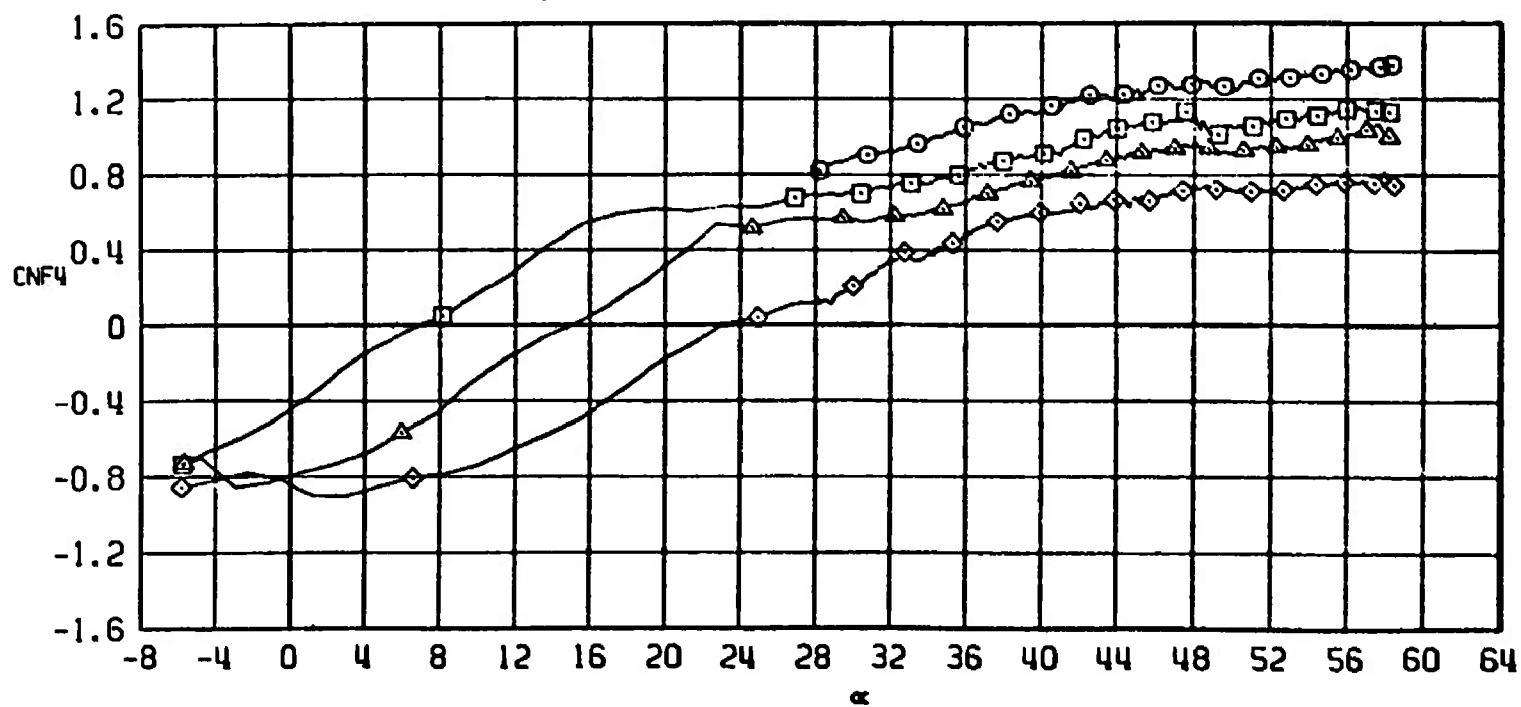
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF13	0	0	0	0	0	0
□	B1WOF13	0	0	-10	0	-10	0
△	B1WOF13	0	0	-20	0	-20	0
◇	B1WOF13	0	0	-30	0	-30	0



h. CLL versus α
Figure 64. Continued.

TEST CENTER NSROC TEST 7

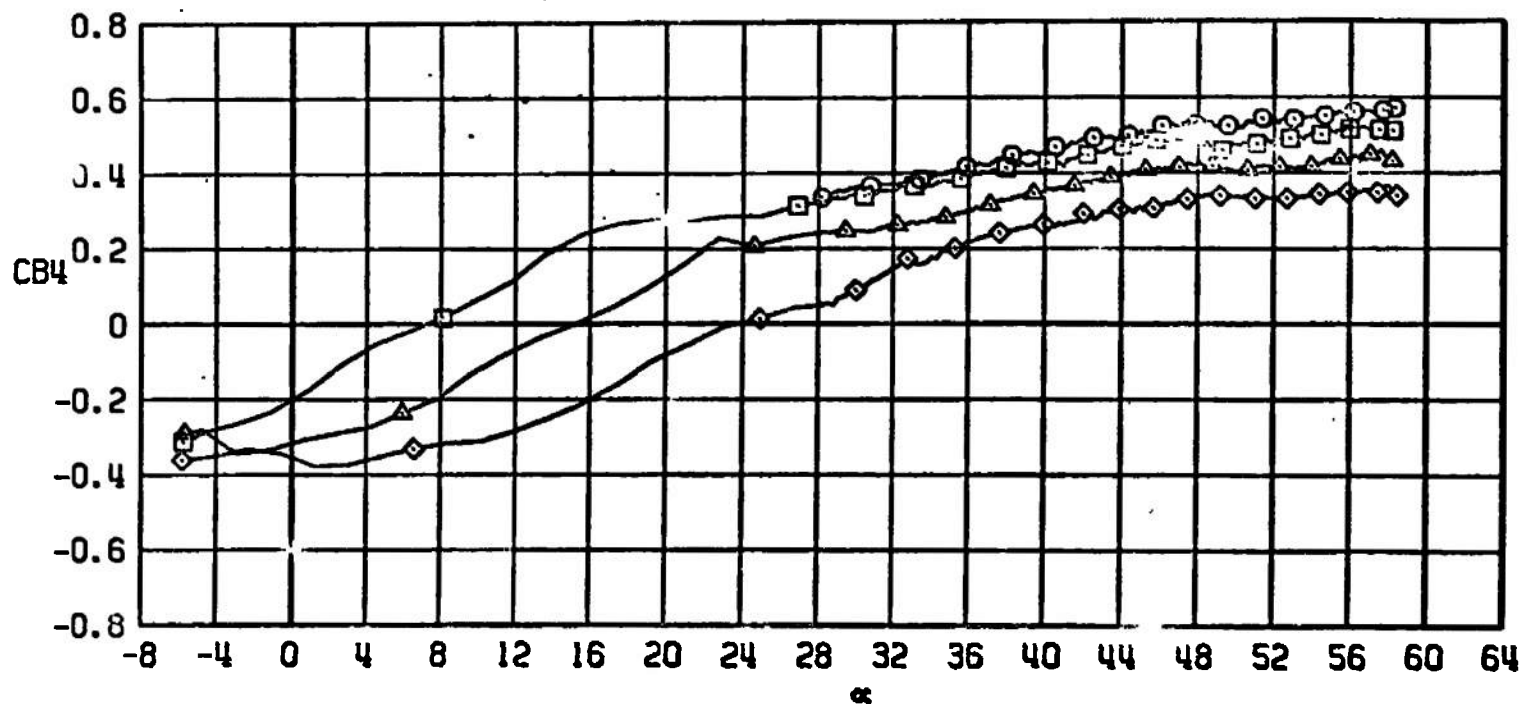
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 64. Continued.

TEST CENTER NSRDC TEST 7

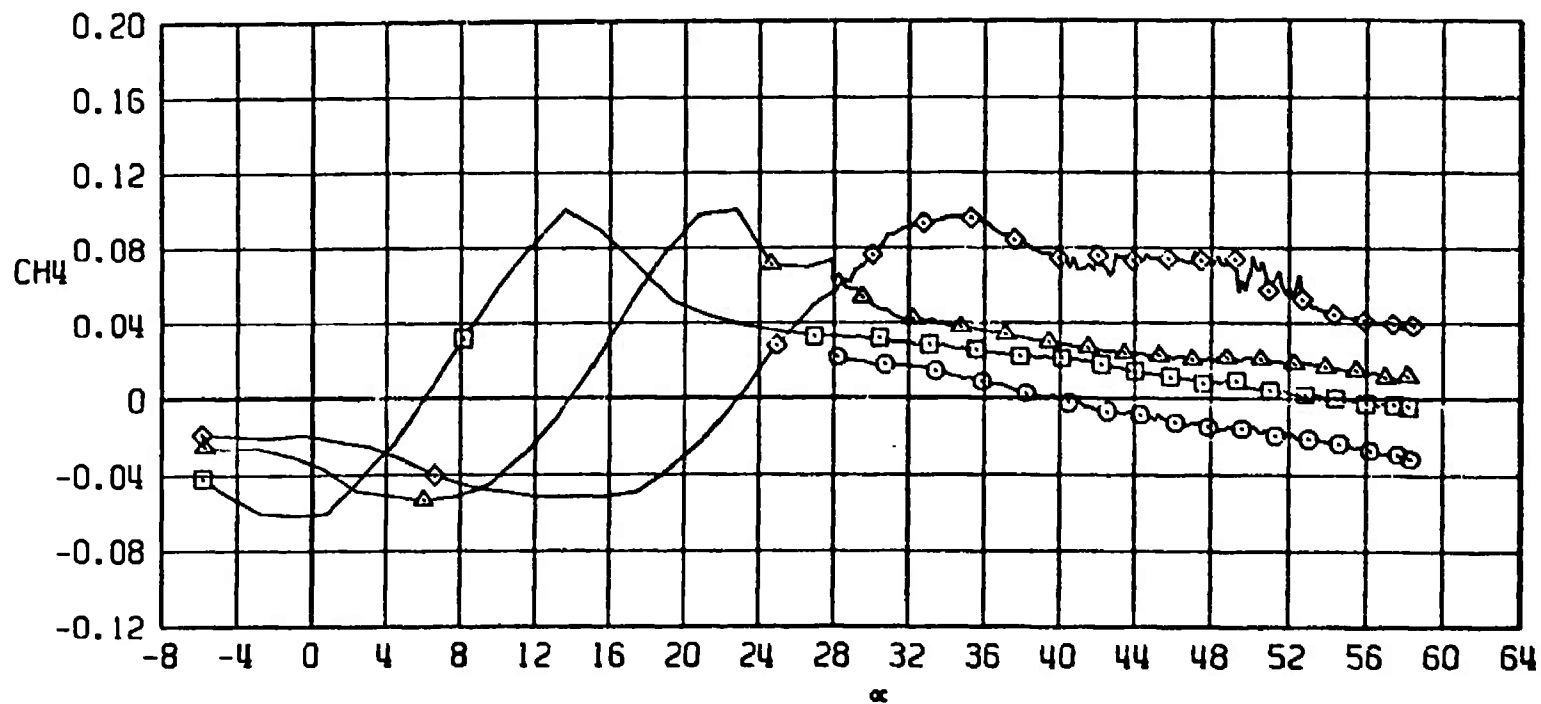
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



j. CB_4 versus α
Figure 64. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 64. Concluded.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1W0F13	0	0	0	0	0	0
□	B1W0F13	0	0	-10	0	-10	0
△	B1W0F13	0	0	-20	0	-20	0
◇	B1W0F13	0	0	-30	0	-30	0

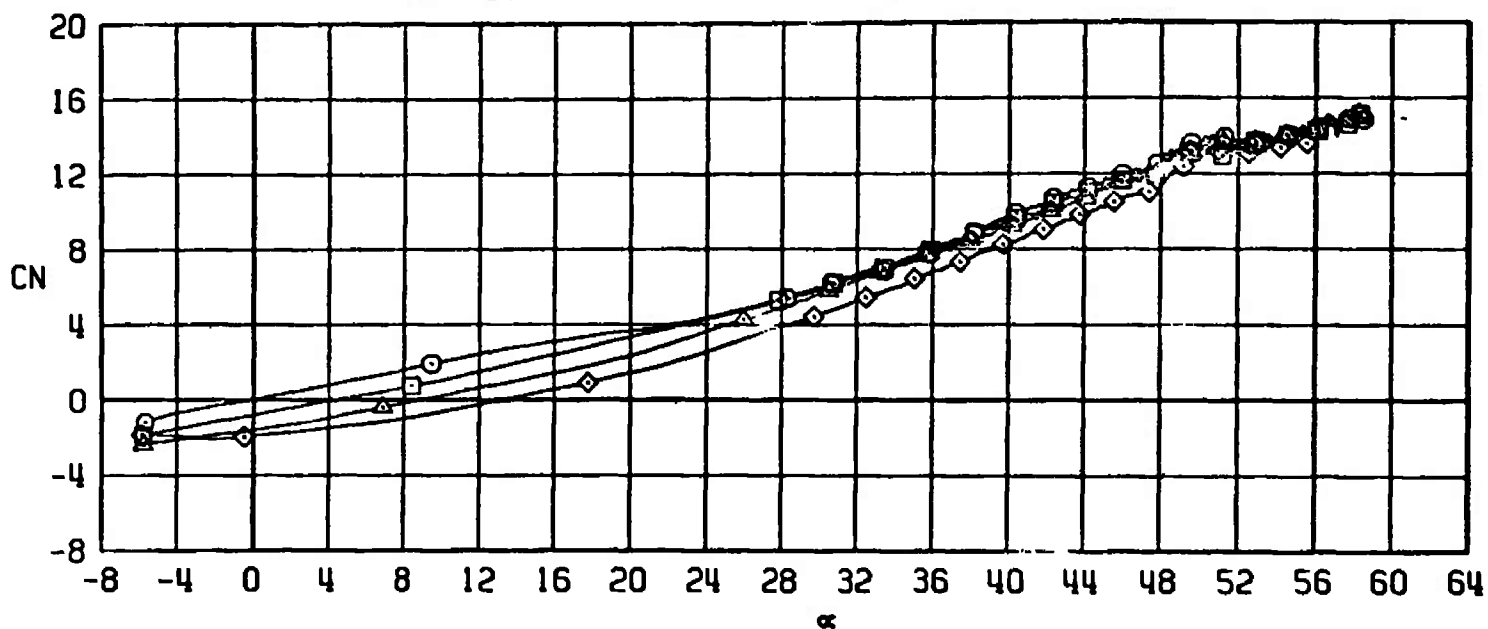
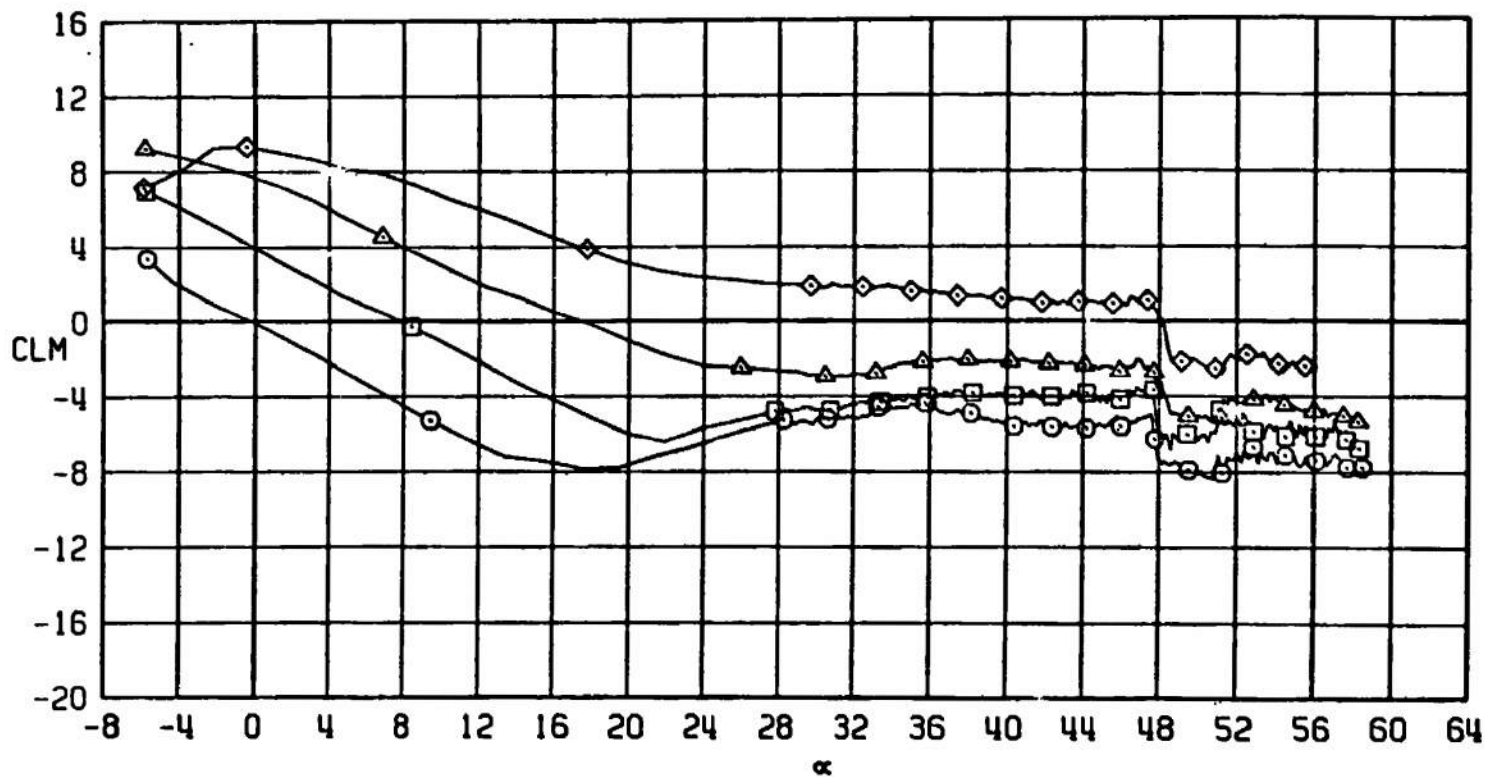
a. C_N versus α

Figure 65. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F13 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.0$.

TEST CENTER NSRDC TEST 7

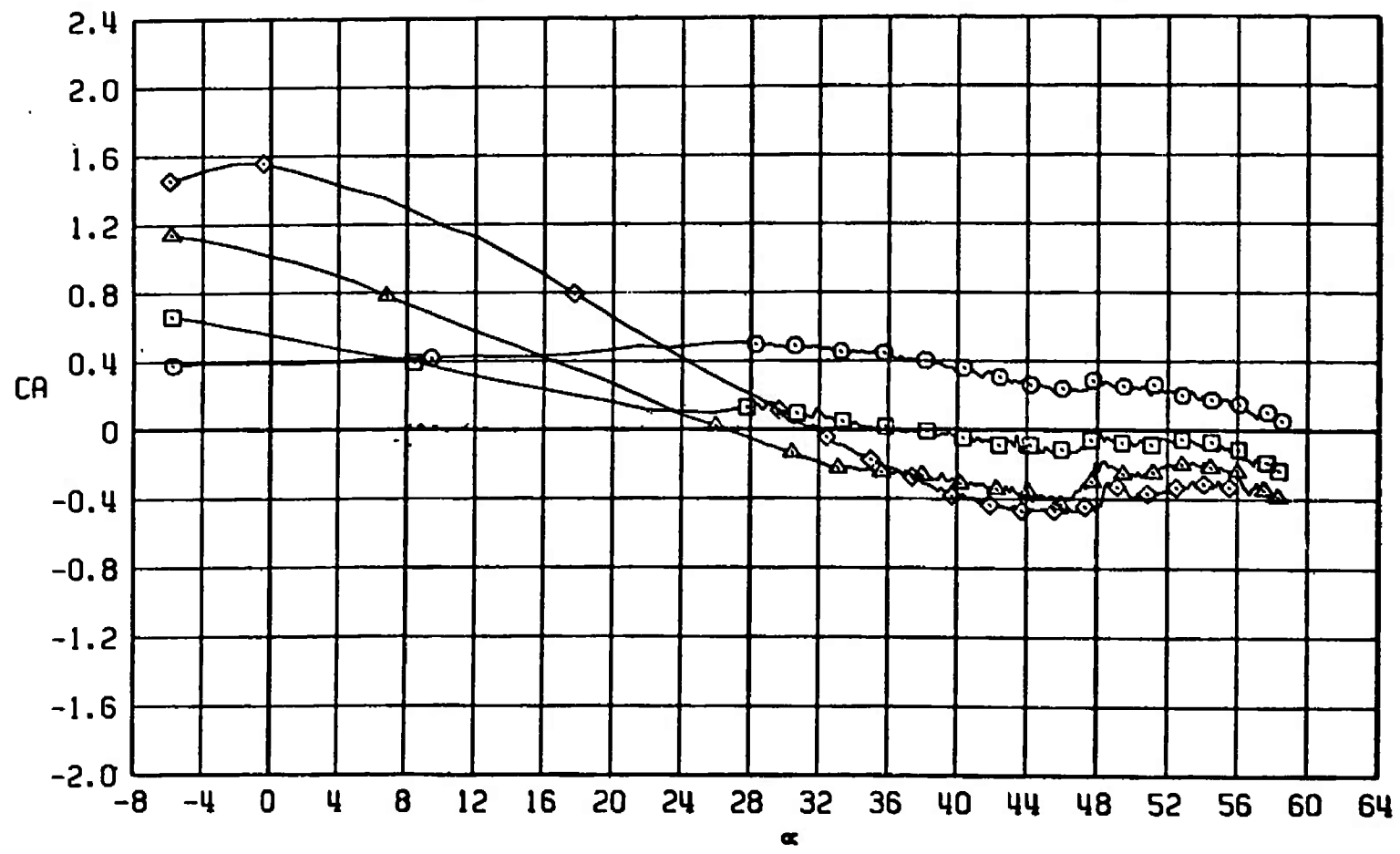
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



b. CLM versus α
Figure 65. Continued.

TEST CENTER NSRDC TEST 7

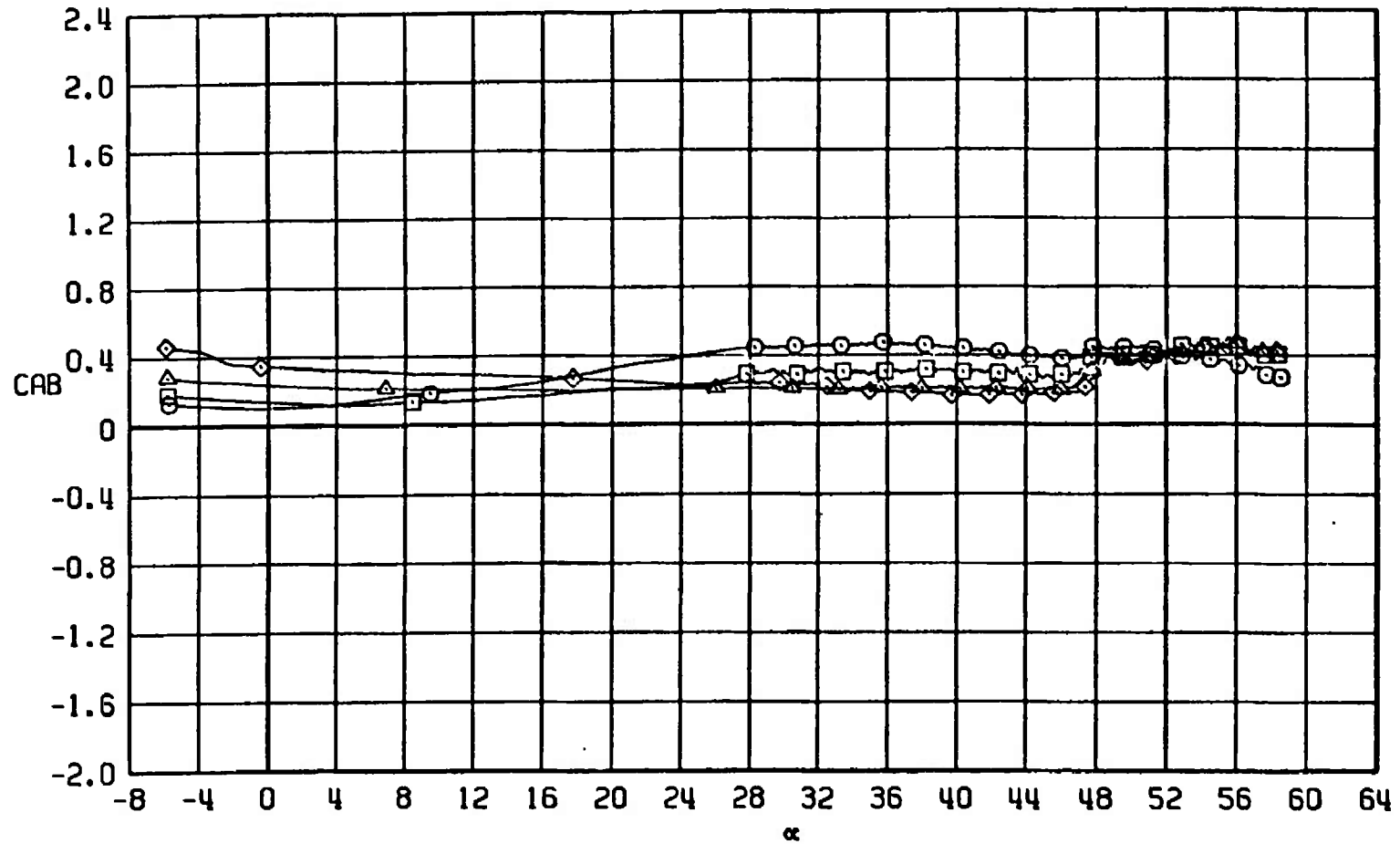
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



c. CA versus α
Figure 65. Continued.

TEST CENTER NSRDC TEST 7

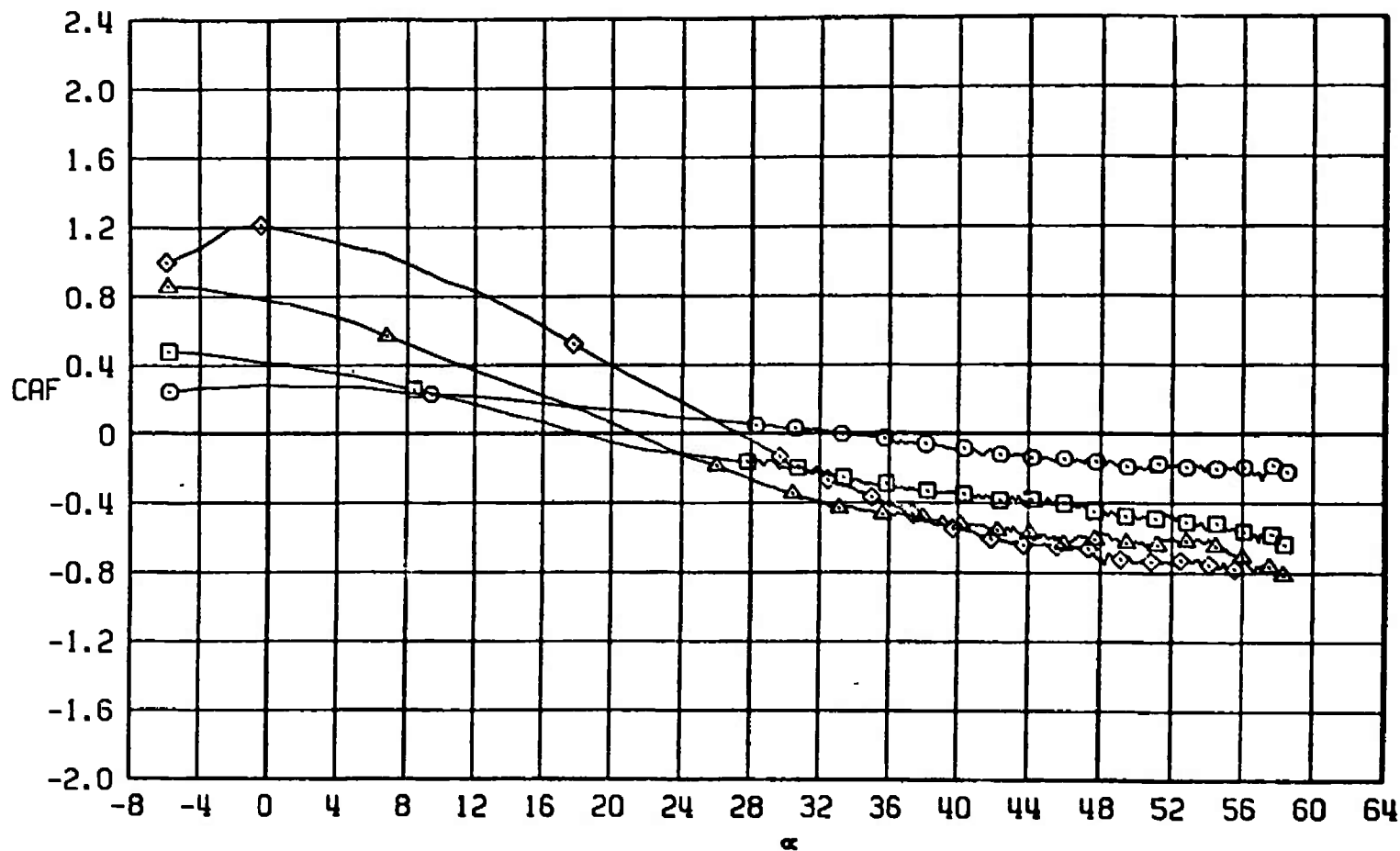
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



d. CAB versus α
Figure 65. Continued.

TEST CENTER NSRDC TEST 7

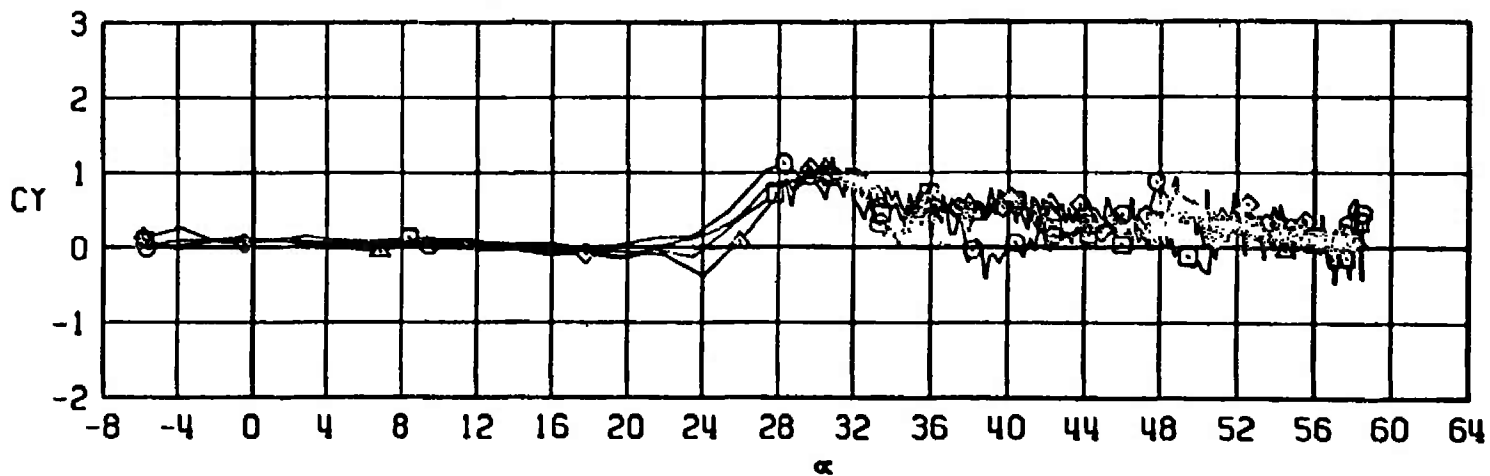
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



e. CAF versus α
Figure 65. Continued.

TEST CENTER NSRDC TEST 7

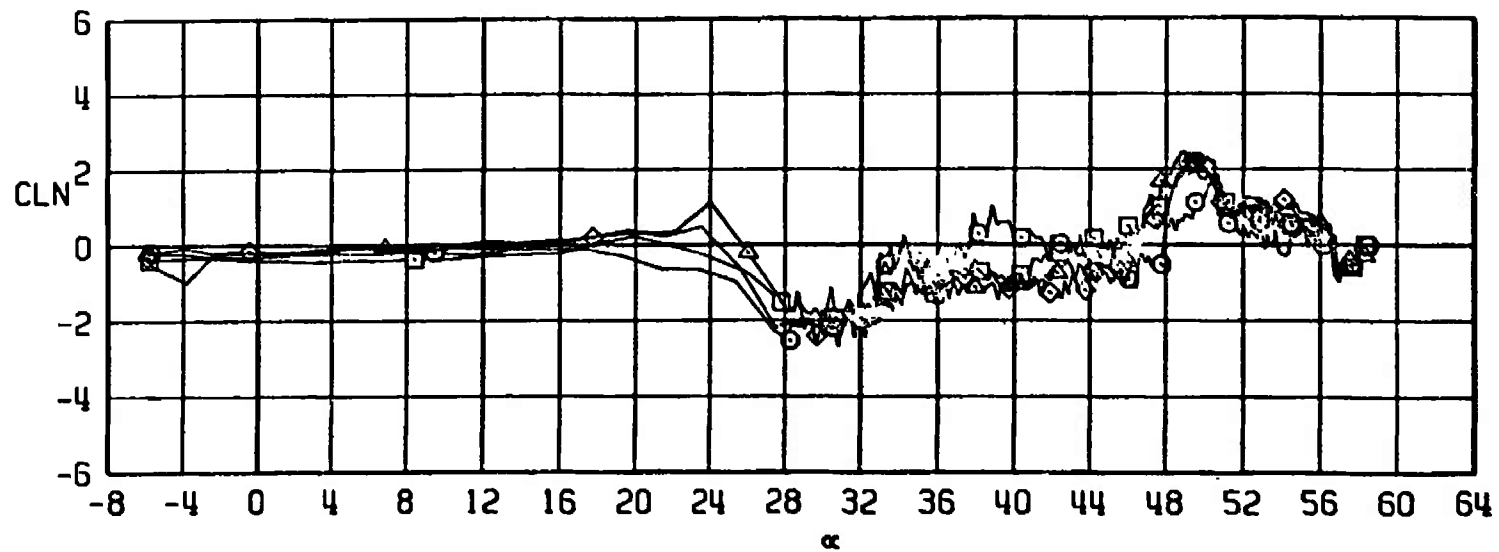
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



f. CY versus α
Figure 65. Continued.

TEST CENTER NSRDC TEST 7

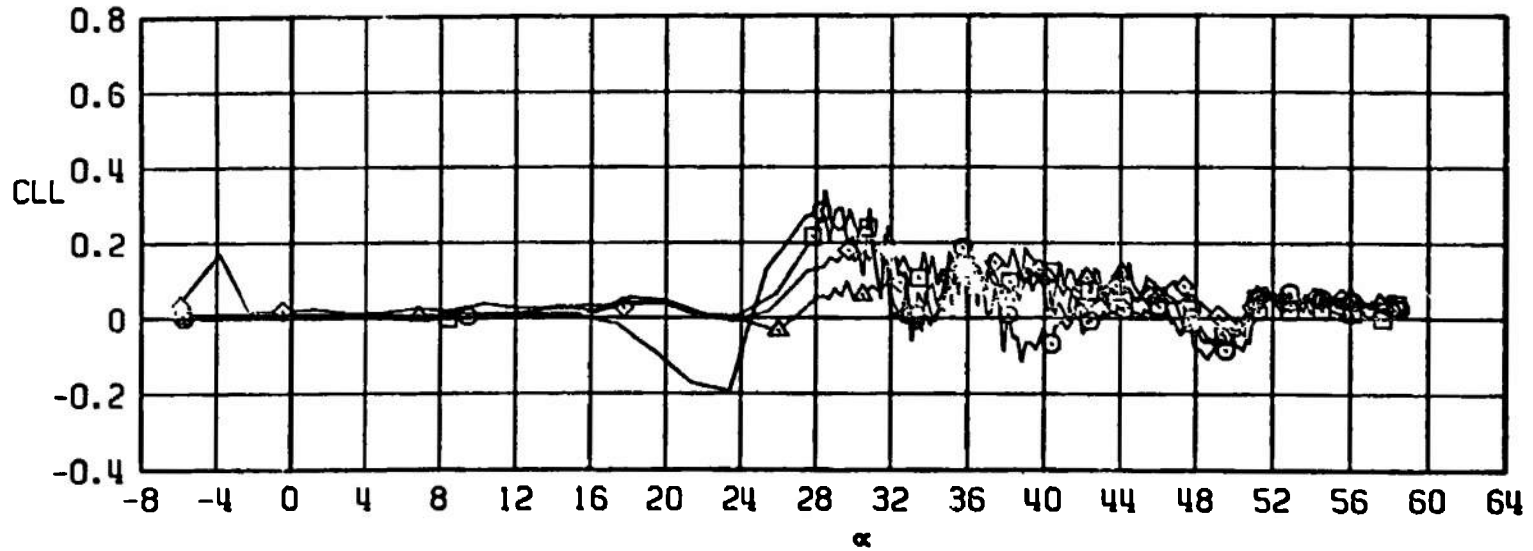
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



g. CLN versus α
Figure 65. Continued.

TEST CENTER NSRDC TEST 7

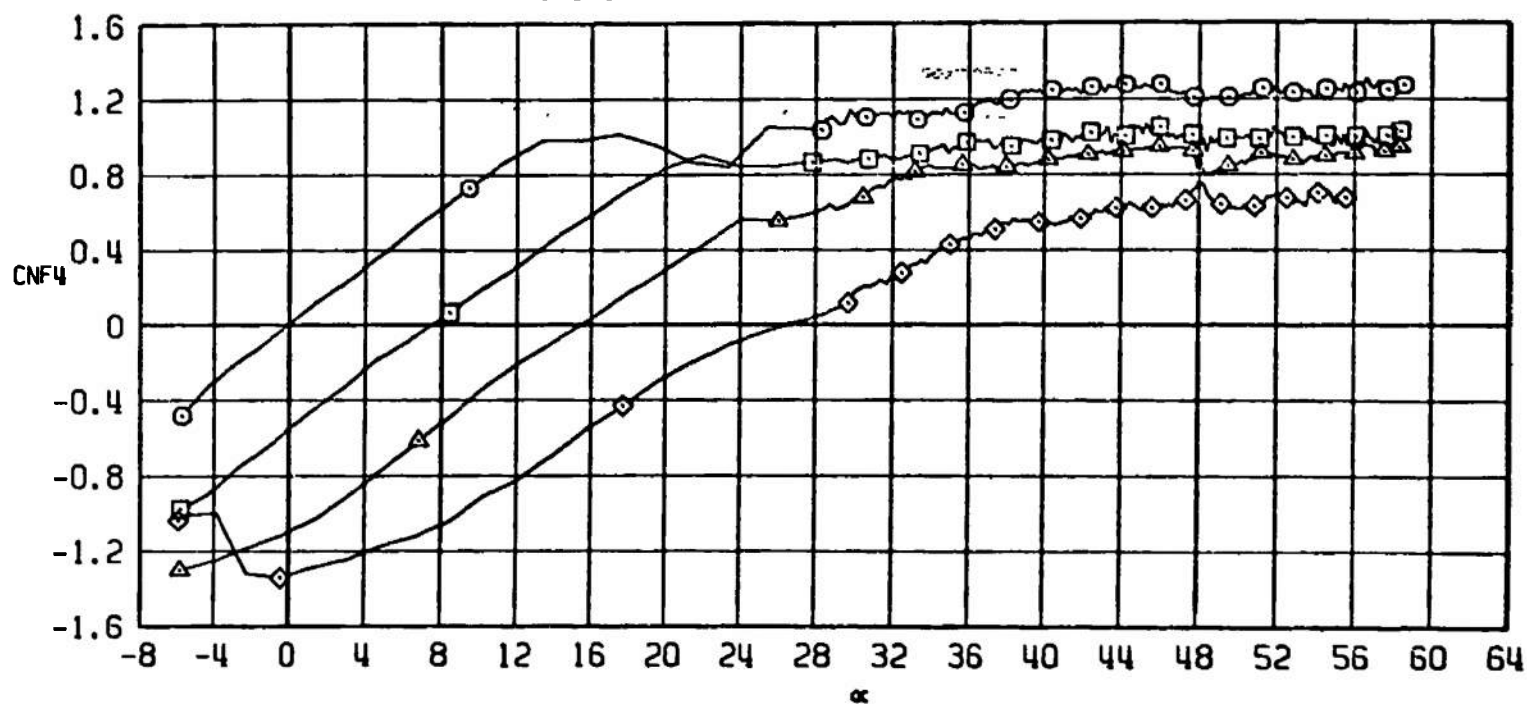
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	
⊙	BIWOF13	0	0	0	0	0	0	67
□	BIWOF13	0	0	-10	0	-10	0	170
△	BIWOF13	0	0	-20	0	-20	0	154
◇	BIWOF13	0	0	-30	0	-30	0	116



h. CLL versus α
Figure 65. Continued.

TEST CENTER NSRDC TEST 7

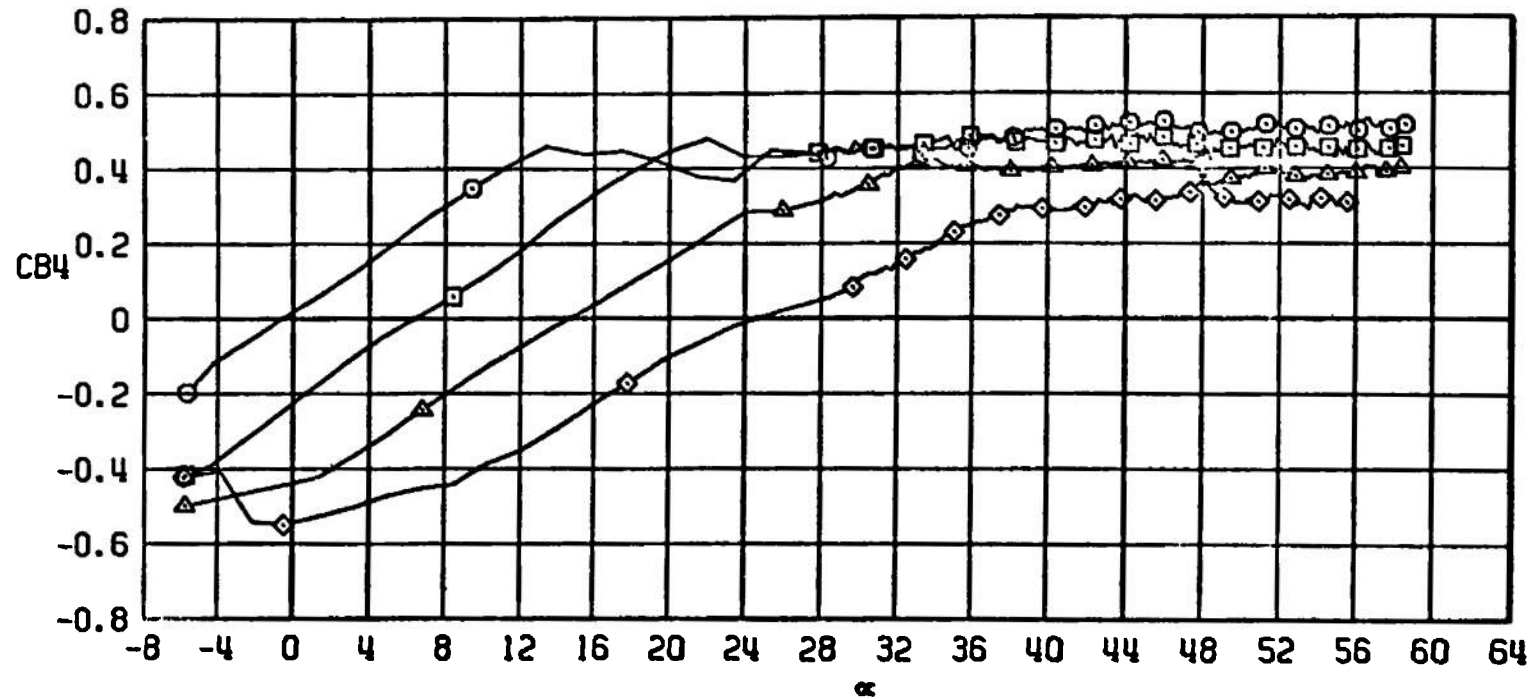
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 65. Continued.

TEST CENTER NSRDC TEST 7

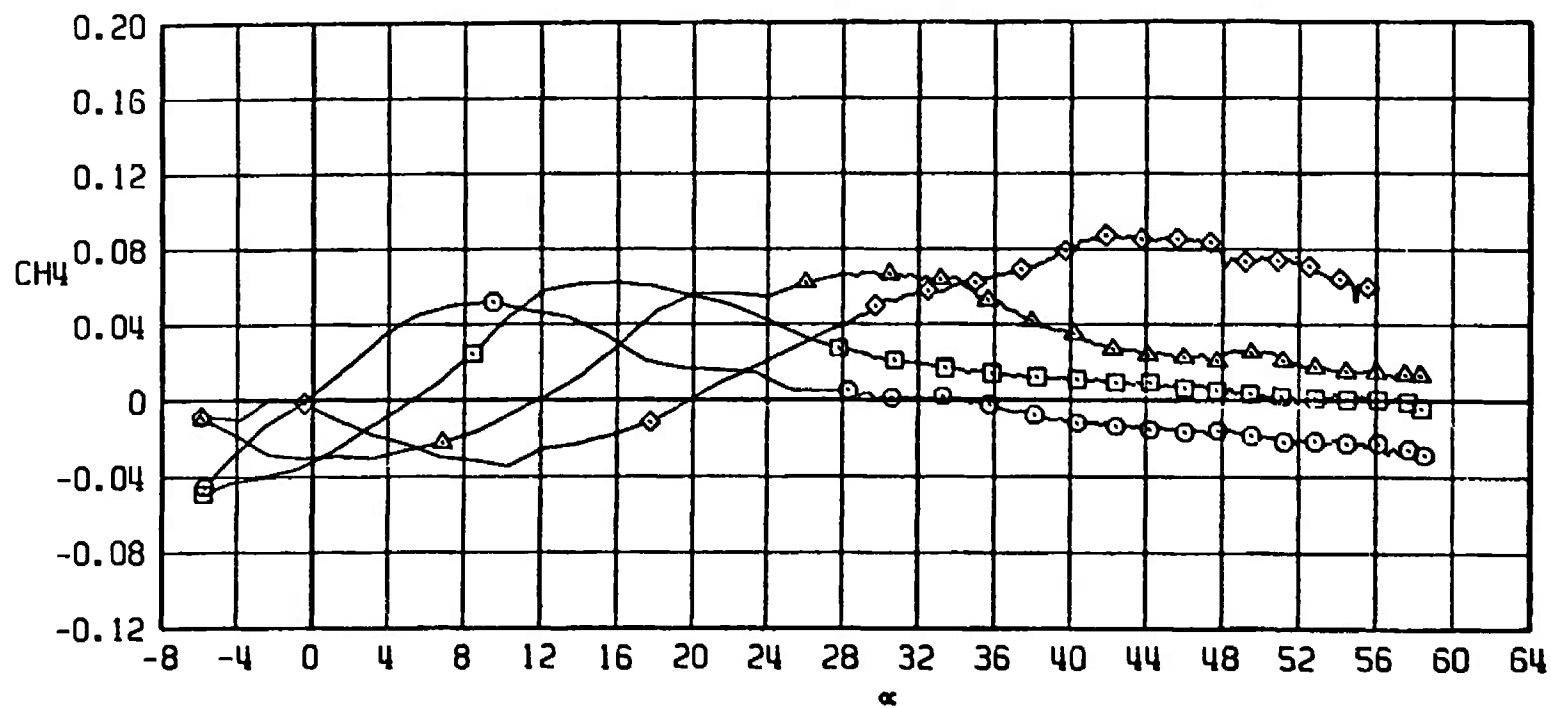
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



j. CB4 versus α
Figure 65. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



k. CH₄ versus α
Figure 65. Concluded.

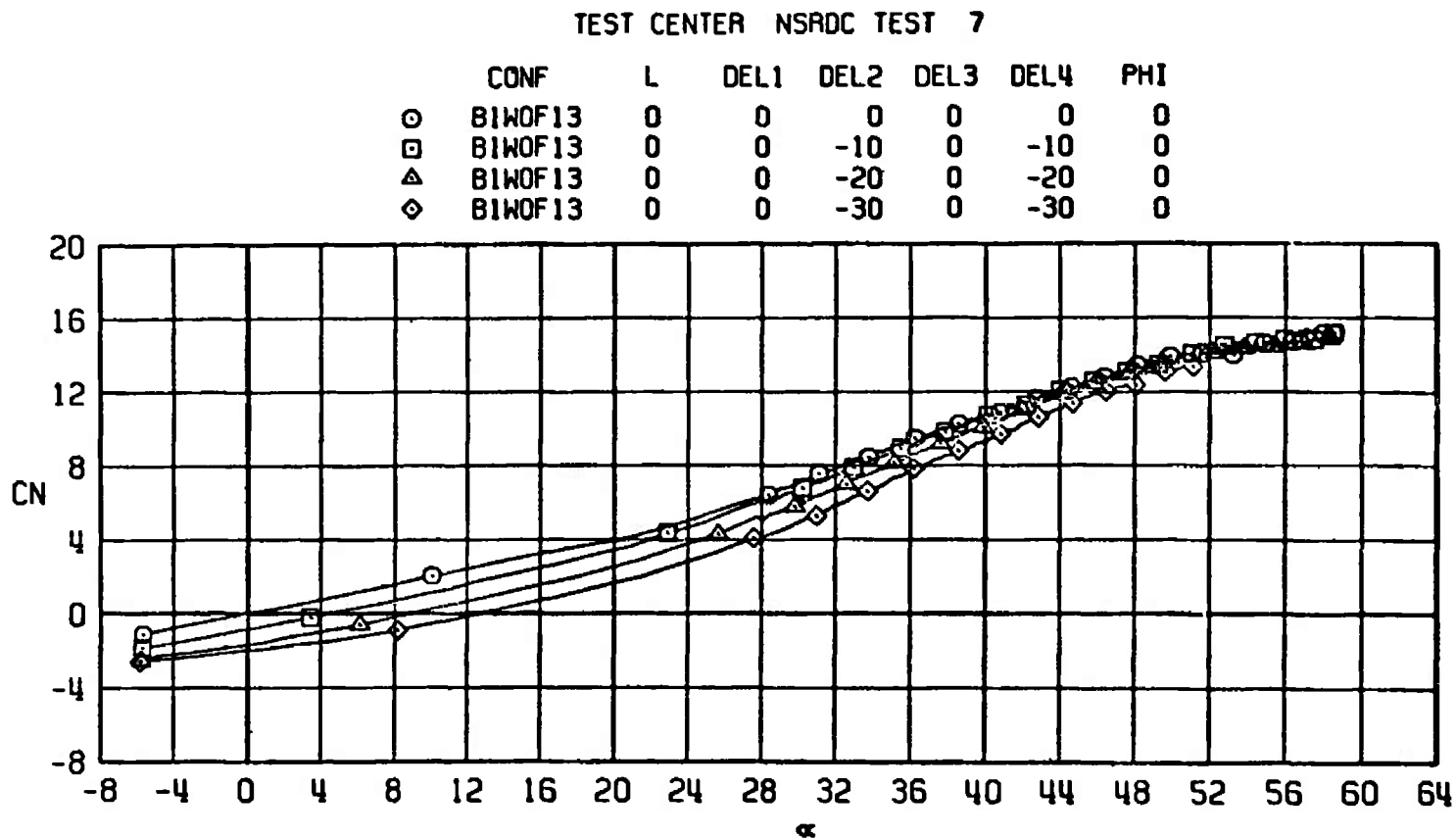
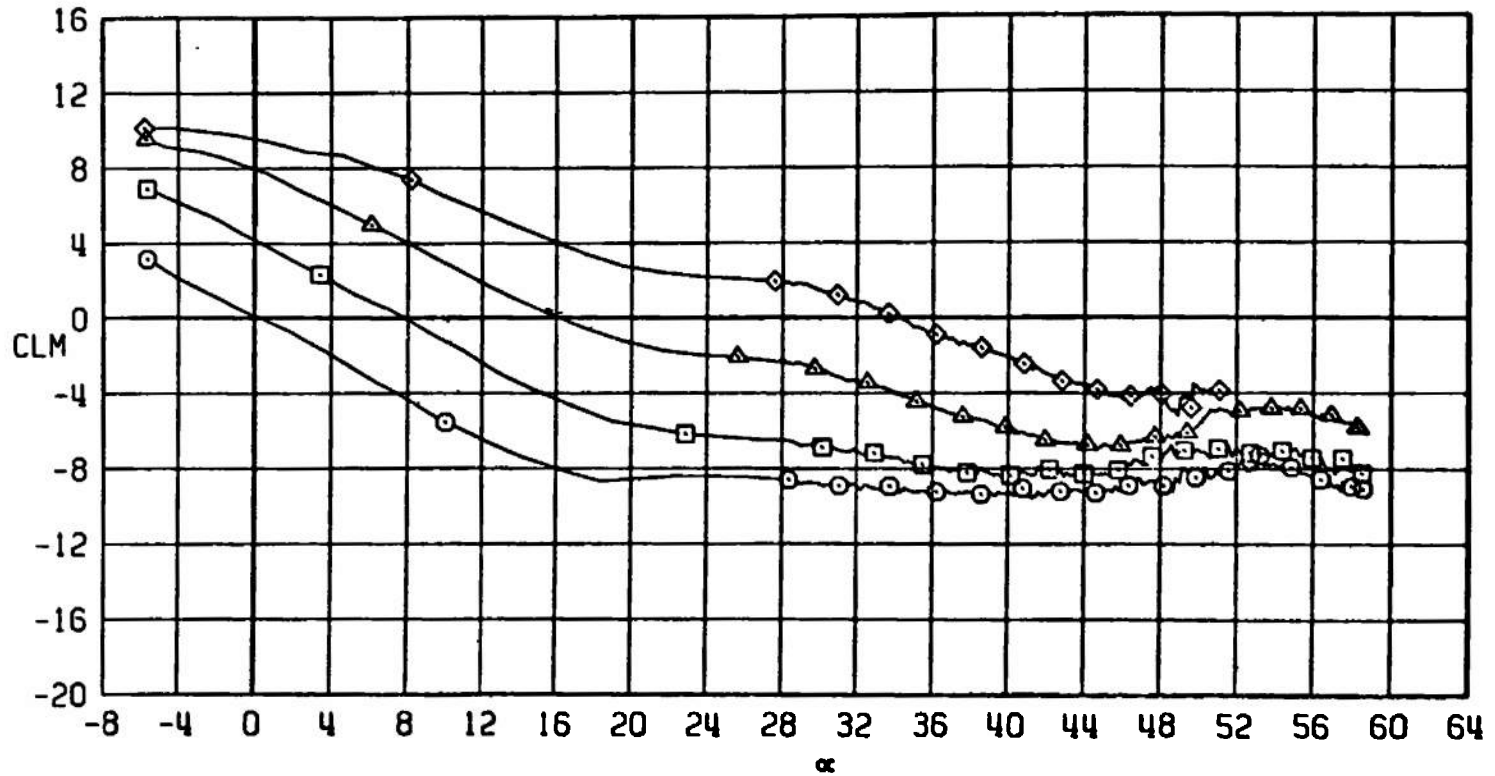


Figure 66. Test No. 7, comparison of aerodynamic coefficients of configuration B1W0F13 for various deflections of tail fins No. 2 and 4 at $M_\infty = 1.1$.

TEST CENTER NSRDC TEST 7

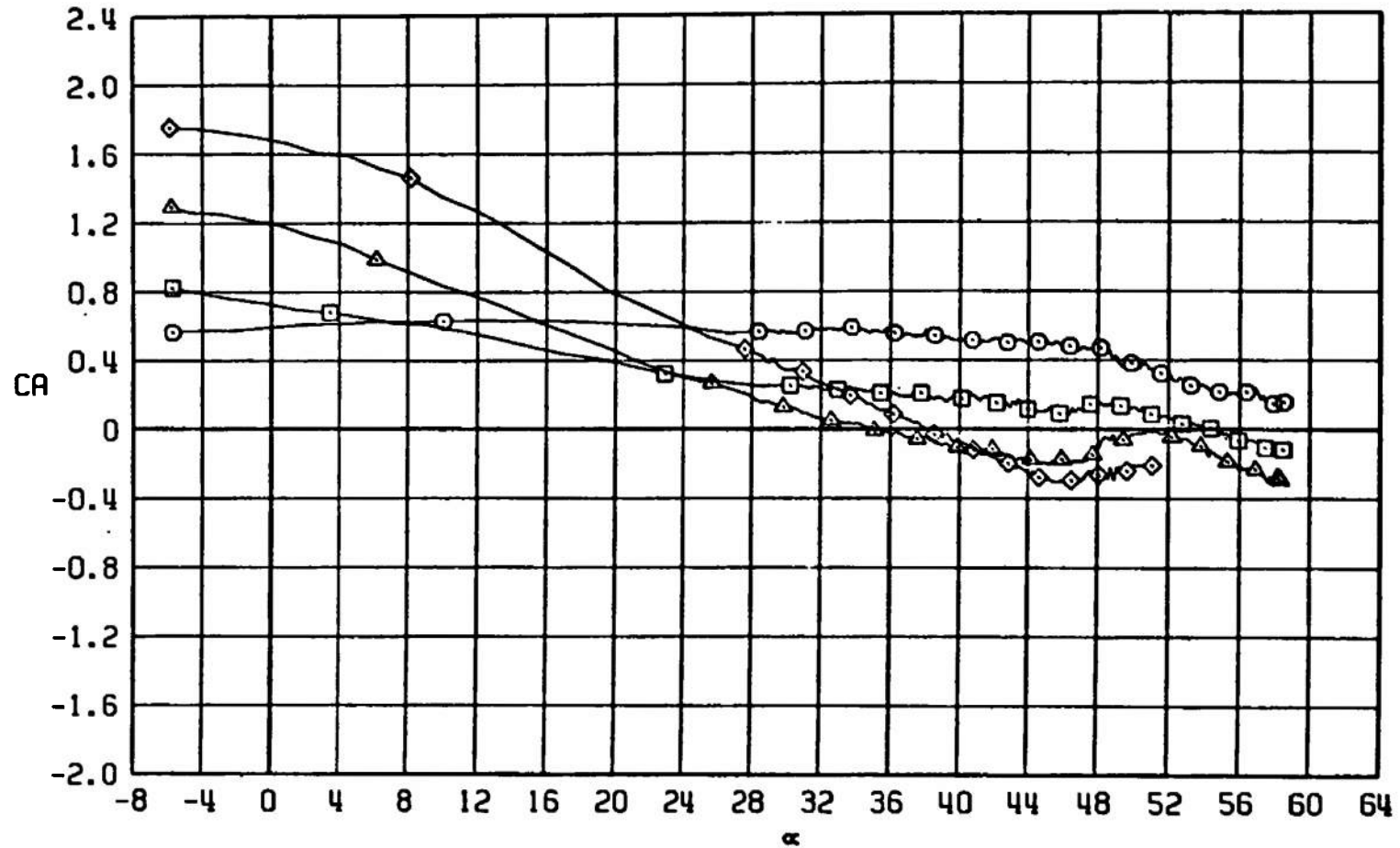
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



b. CLM versus α
Figure 66. Continued.

TEST CENTER NSRDC TEST 7

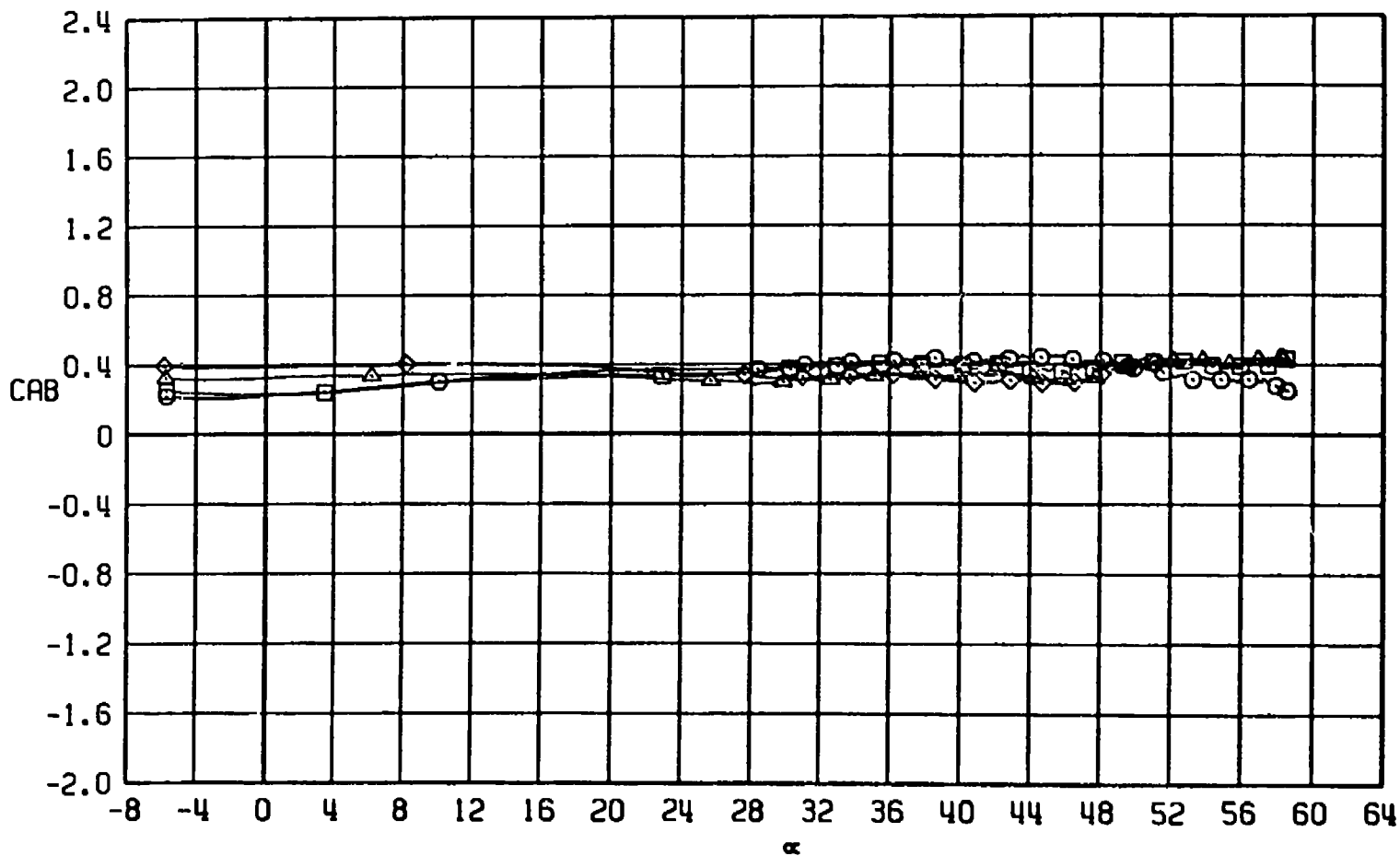
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13.	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



c. CA versus α
Figure 66. Continued.

TEST CENTER NSRDC TEST 7

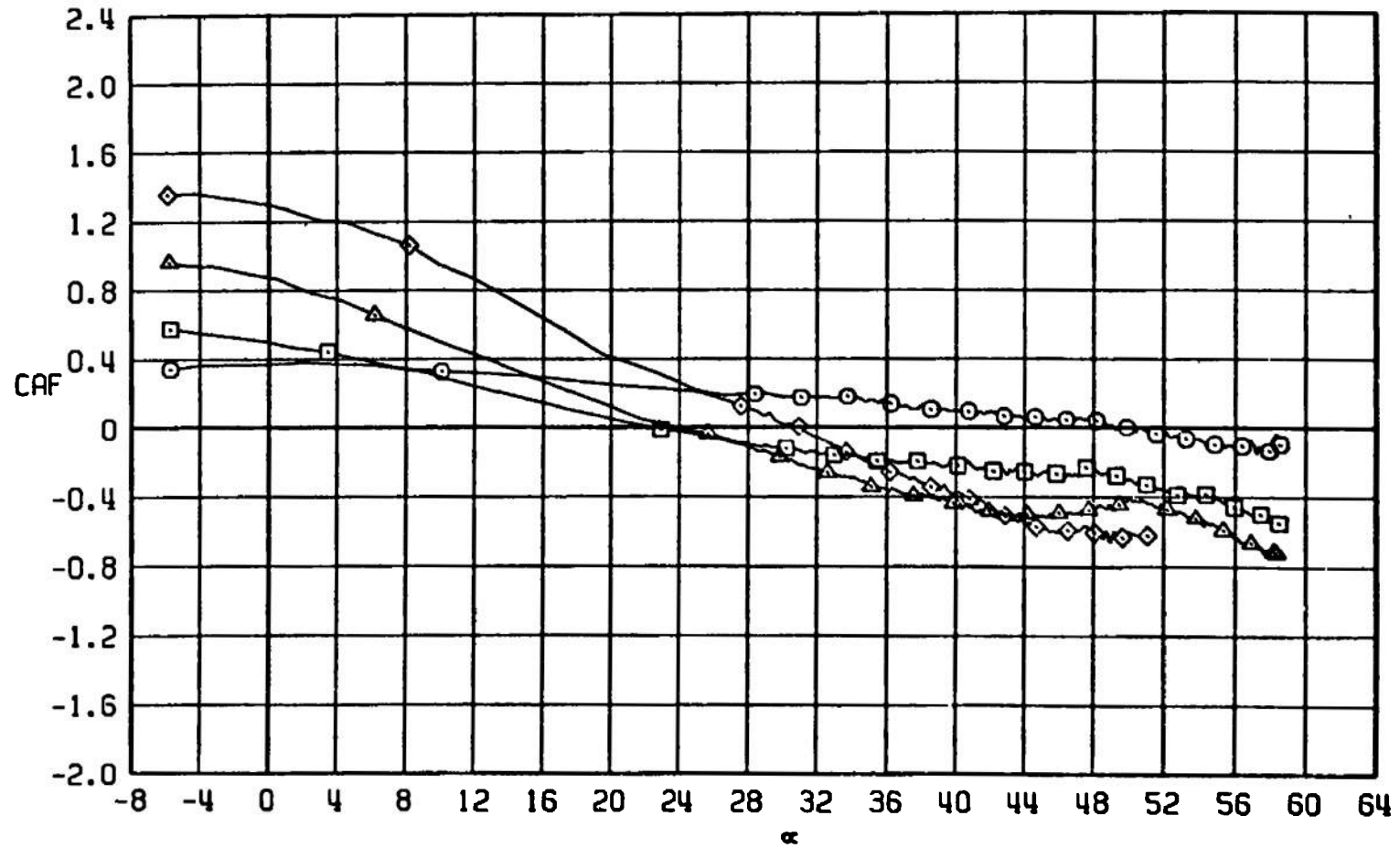
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	B1WOF13	0	0	0	0	0	0
□	B1WOF13	0	0	-10	0	-10	0
△	B1WOF13	0	0	-20	0	-20	0
◇	B1WOF13	0	0	-30	0	-30	0



d. CAB versus α
Figure 66. Continued.

TEST CENTER NSRDC TEST 7

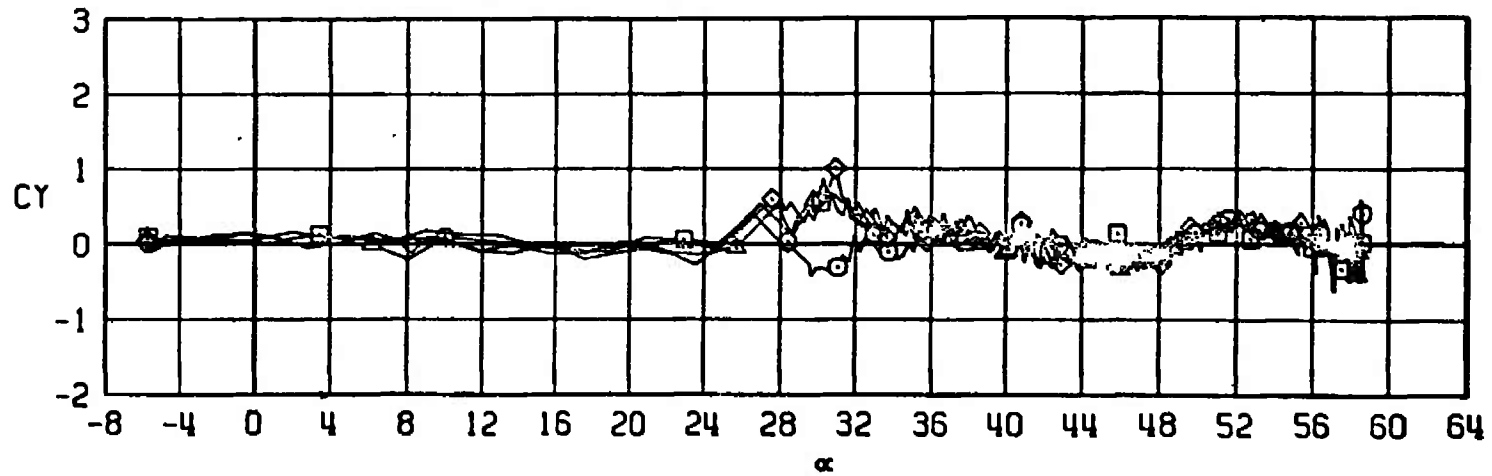
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



e. CAF versus α
Figure 66. Continued.

TEST CENTER NSRDC TEST 7

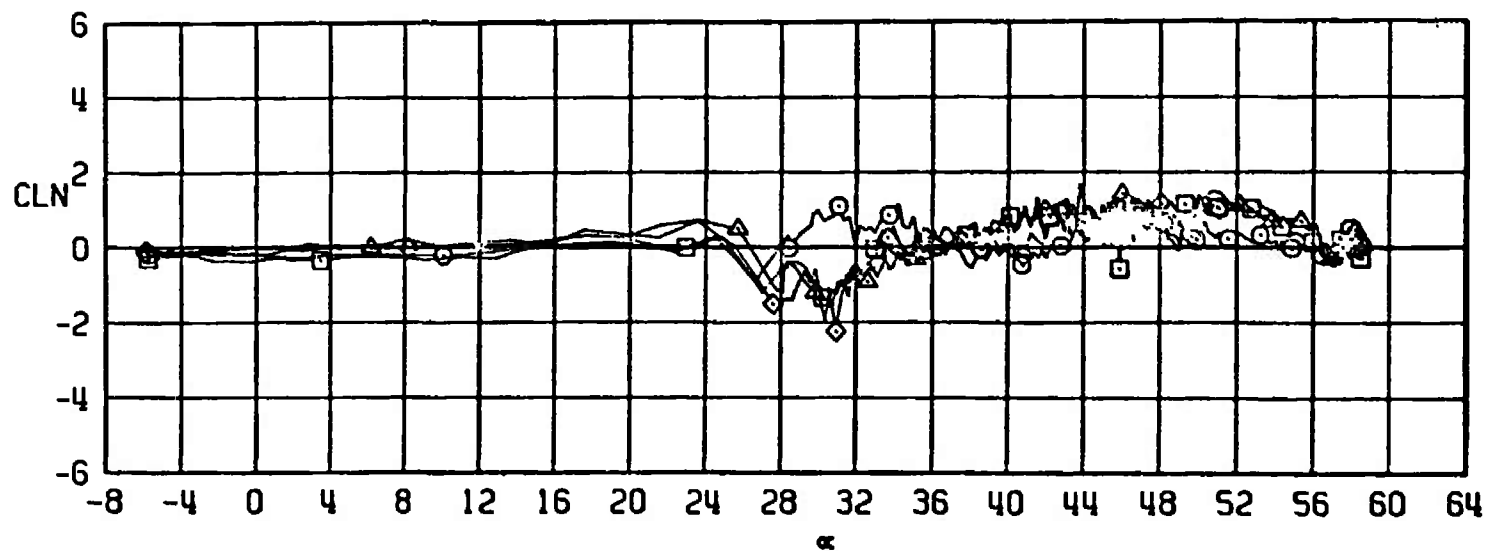
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
⊙	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



f. CY versus α
Figure 66. Continued.

TEST CENTER NSRDC TEST 7

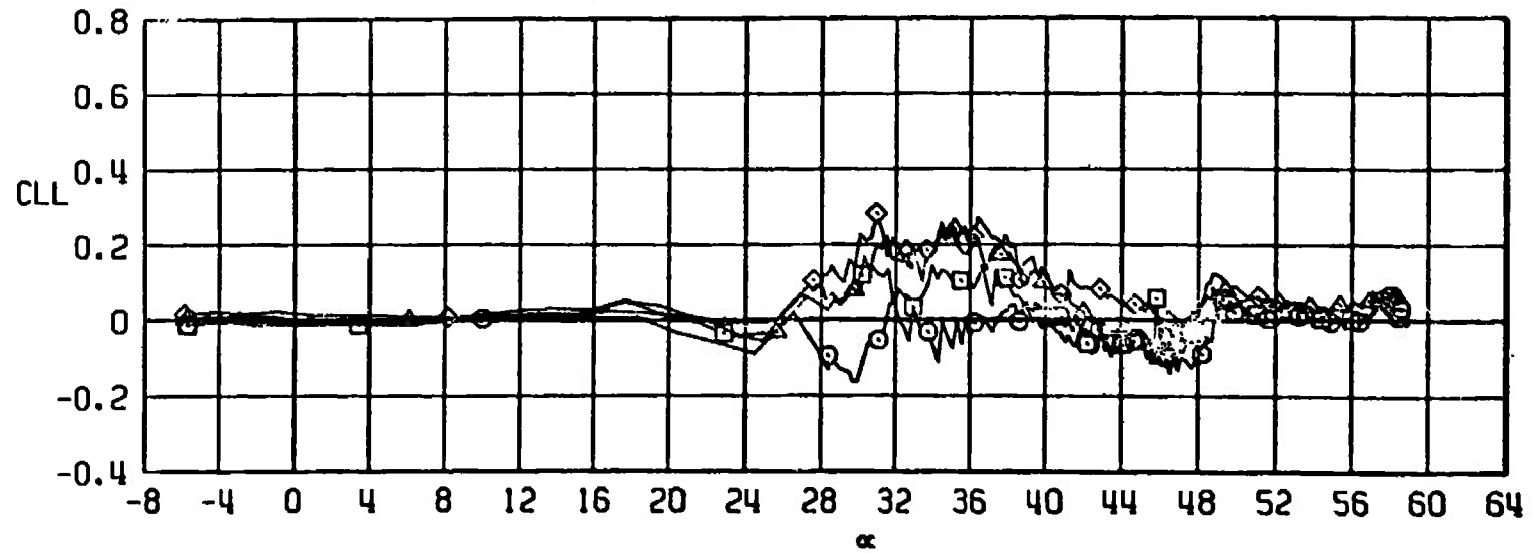
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



g. CLN versus α
Figure 66. Continued.

TEST CENTER NSRDC TEST 7

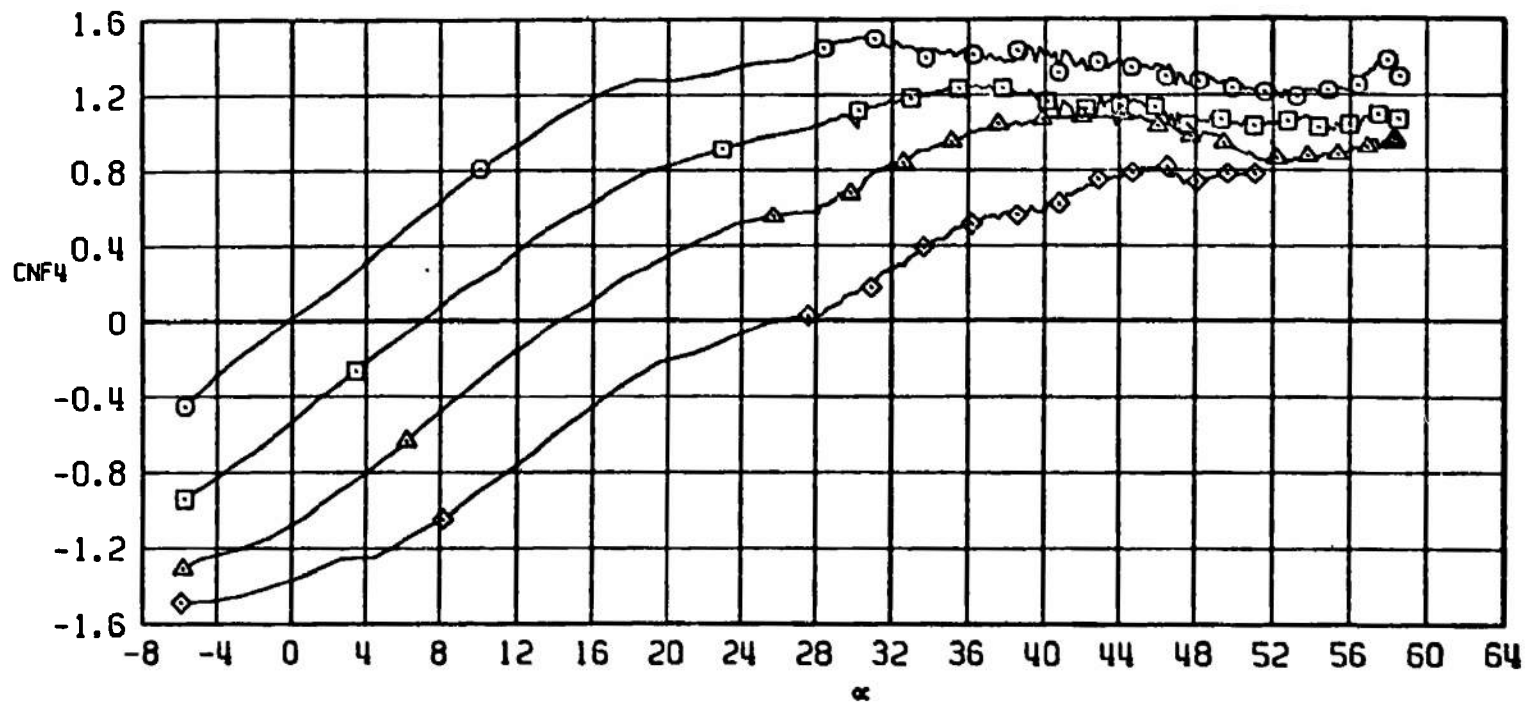
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



h. CLL versus α
Figure 66. Continued.

TEST CENTER NSRDC TEST 7

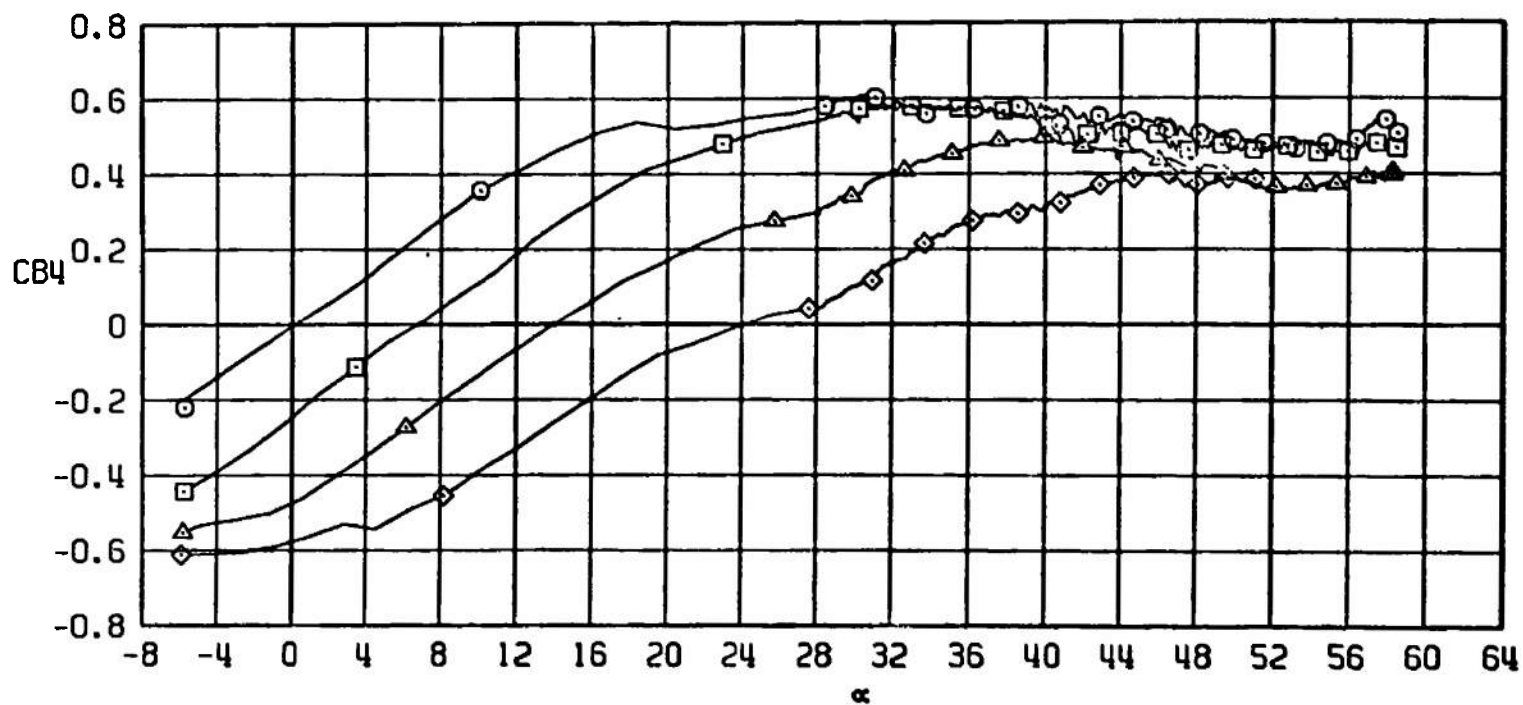
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



i. CNF4 versus α
Figure 66. Continued.

TEST CENTER NSRDC TEST 7

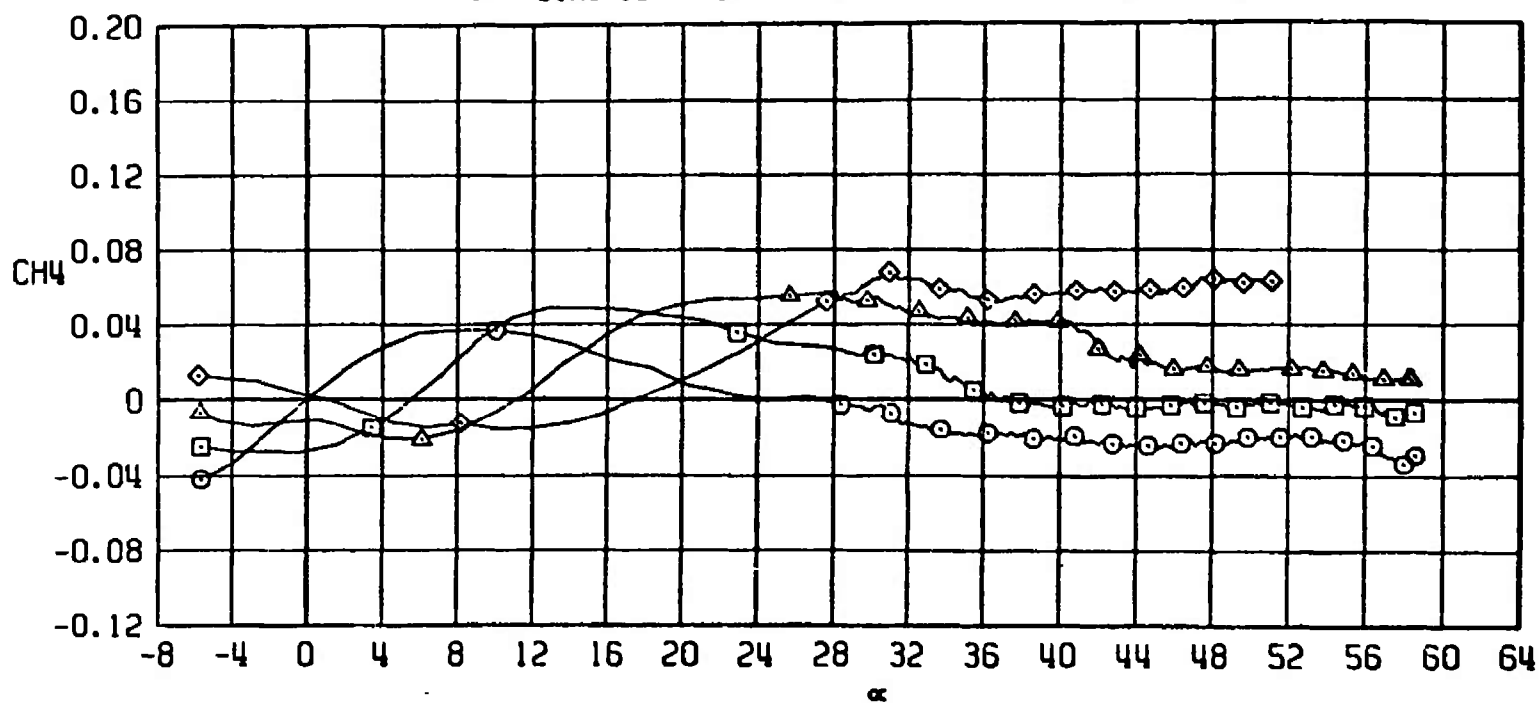
	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



j. CB4 versus α
Figure 66. Continued.

TEST CENTER NSRDC TEST 7

	CONF	L	DEL1	DEL2	DEL3	DEL4	PHI
○	BIWOF13	0	0	0	0	0	0
□	BIWOF13	0	0	-10	0	-10	0
△	BIWOF13	0	0	-20	0	-20	0
◇	BIWOF13	0	0	-30	0	-30	0



k. CH_4 versus α
Figure 86. Concluded.

Table 1. Measured Dimensions of Each Tail Fin Configuration (All Fins)

Tail Fin No.	Conf.	b	C _R	C _T	X
1	F11 ↓	1.8784	3.7474	3.7474	1.6884
2		1.8797	3.7477	3.7477	1.6859
3		1.8768	3.7505	3.7505	1.6891
4		1.8788	3.7516	3.7516	1.6903
Average	↓	1.8784	3.7493	3.7493	1.6884
1	F12 ↓	2.8050	5.6090	0	3.4703
2		2.8135	5.6103	0	3.4712
3		2.8127	5.6184	0	3.4794
4		2.8068	5.6215	0	3.4852
Average	↓	2.8095	5.6148	0	3.4765
1	F13 ↓	2.8076	3.7472	1.8840	2.0533
2		2.8141	3.7479	1.8720	2.0512
3		2.8103	3.7514	1.8750	2.0586
4		2.8124	3.7446	1.8950	2.0476
Average	↓	2.8111	3.7478	1.8815	2.0527
1	F14 ↓	1.8756	7.5193	0	4.6662
2		1.8802	7.5394	0	4.6831
3		1.8748	7.5098	0	4.6523
4		1.8790	7.5305	0	4.6747
Average	↓	1.8774	7.5248	0	4.6690
1	F15 ↓	1.8735	4.9938	2.4990	2.7453
2		1.8732	4.9951	2.4990	2.7489
3		1.8755	4.9931	2.4930	2.7459
4		1.8740	4.9925	2.5030	2.7431
Average	↓	1.8741	4.9936	2.4985	2.7458

Tail Fin No.	Conf.	b	C _R	C _T	X
1	F16 ↓	2.8072	2.8325	2.8305	1.2762
2		2.8067	2.8319	2.8232	1.2767
3		2.8069	2.8260	2.8256	1.2691
4		2.8045	2.8292	2.8244	1.2732
Average	↓	2.8063	2.8299	2.8272	1.2738
1	F21 ↓	1.8760	1.8730	1.8730	0.8432
2		1.8744	1.8741	1.8741	0.8423
3		1.8728	1.8743	1.8743	0.8434
4		1.8709	1.8726	1.8726	0.8427
Average	↓	1.8735	1.8735	1.8735	0.8429
1	F22 ↓	1.8794	3.7560	0	2.3279
2		1.8803	3.7555	0	2.3265
3		1.8736	3.7563	0	2.3274
4		1.8749	3.7527	0	2.3232
Average	↓	1.8771	3.7551	0	2.3263
1	F23 ↓	1.8731	2.5600	1.3000	1.4036
2		1.8589	2.5933	1.3220	1.4160
3		1.8696	2.5593	1.2960	1.4018
4		1.8765	2.5929	1.2900	1.4106
Average	↓	1.8695	2.5764	1.3020	1.4080
1	F31 ↓	1.8740	9.9490	5.0010	5.4553
2		1.8675	9.8540	4.9800	5.4550
3		1.8785	9.9327	4.9520	5.4419
4		1.8666	9.9435	4.9750	5.4534
Average	↓	1.8717	9.9198	4.9770	5.4514

Tail Fin No.	Conf.	b	C _R	C _T	X
1	F32 ↓	1.8725	7.5008	7.5008	3.3758
2		1.8274	7.4992	7.4992	3.3768
3		1.8731	7.4973	7.4973	3.3729
4		1.8761	7.5005	7.5005	3.3747
Average	↓	1.8623	7.4995	7.4995	3.3751
1	F33 ↓	4.3962	4.3971	4.3971	1.9791
2		4.3723	4.3974	4.3956	1.9843
3		4.3851	4.3967	4.3924	1.9829
4		4.3788	4.3971	4.3960	1.9795
Average	↓	4.3831	4.3971	4.3953	1.9815
1	F34 ↓	4.3953	5.5601	2.8080	3.0384
2		4.3962	5.5616	2.8020	3.0399
3		4.3858	5.5685	2.7900	3.0496
4		4.3939	5.5779	2.8140	3.0563
Average	↓	4.3928	5.5670	2.8035	3.0461
1	F35 ↓	4.3542	8.7100	0	5.3676
2		4.3454	8.6789	0	5.3418
3		4.3523	8.6914	0	5.3531
4		4.3912	8.7273	0	5.3859
Average	↓	4.3608	8.7019	0	5.3621
1	F36 ↓	1.8890	14.9558	0	9.2537
2		1.8817	14.9738	0	9.2716
3		1.8850	14.9805	0	9.2790
4		1.8553	15.0044	0	9.3025
Average	↓	1.8778	14.9786	0	9.2767

Table 2. Test Number 1 Data Uncertainties

ΔC_N	ΔC_{LM}	ΔC_A	$\Delta \alpha$	ΔM_∞
± 0.067	± 0.078	± 0.014	$\pm 0.1^\circ$	± 0.005 for $M_\infty \leq 0.95$ ± 0.010 for $0.95 < M_\infty \leq 1.3$

Table 3. Test Number 6 Data Uncertainties

ΔC_N	ΔC_{LM}	ΔC_{NF4} ΔC_{NFI}	ΔC_{H4} ΔC_{HI}	ΔC_{B4} ΔC_{BI}	$\Delta \alpha$	ΔM_∞
± 0.100	± 0.020	± 0.050	± 0.007	± 0.050	0.1°	± 0.01

Table 4. Test Number 2 Body plus Fin Data Uncertainties

M_∞	Model Body			Fin F14			Fin F15			Fin F21			Fin F32			Fin F36		
	ΔC_N	ΔC_{LM}	ΔC_A	ΔC_{NF4}	ΔC_{H4}	ΔC_{B4}	ΔC_{NF4}	ΔC_{H4}	ΔC_{B4}	ΔC_{NF4}	ΔC_{H4}	ΔC_{B4}	ΔC_{NF4}	ΔC_{H4}	ΔC_{B4}	ΔC_{NF4}	ΔC_{H4}	ΔC_{B4}
0.80	0.021	0.105	0.012	0.015	0.004	0.008	0.015	0.005	0.008	0.020	0.026	0.013	0.013	0.002	0.007	0.013	0.002	0.007
0.85	0.019	0.100	0.012	0.013	0.003	0.008	0.013	0.005	0.008	0.019	0.025	0.012	0.011	0.002	0.006	0.011	0.002	0.006
0.92	0.017	0.094	0.011	0.011		0.007	0.011	0.005	0.007	0.018	0.024	0.012	0.009	0.002	0.005	0.009	0.001	0.005
0.98	0.015	0.089	0.010	0.010		0.006	0.010	0.004	0.006	0.016	0.023	0.011	0.008	0.002	0.004	0.008		0.003
1.10	0.014	0.083	0.010	0.008		0.005	0.008		0.005	0.014	0.021	0.010	0.006	0.001	0.003	0.006		0.002
1.20	0.012	0.079	0.009	0.007		0.005	0.007		0.005	0.013	0.021	0.009	0.005	0.001	0.003	0.005		0.002
1.30	0.012	0.077	0.009	0.007		0.005	0.007		0.005	0.013	0.020	0.009	0.004	0.001	0.002	0.004		0.002

Table 5. Test Number 2 Fin-Along Data Uncertainties

M_∞	Fin F11			Fin F14			Fin F36		
	ΔC_{NF}	ΔC_H	ΔC_B	ΔC_{NF}	ΔC_H	ΔC_B	ΔC_{NF}	ΔC_H	ΔC_B
0.80	0.026	0.015	0.013	0.026	0.008	0.013	0.026	0.004	0.013
0.85	0.024	0.015	0.012	0.024	0.007	0.012	0.024	0.004	0.012
0.92	0.022	0.014	0.011	0.022	0.007	0.011	0.022	0.004	0.011
0.98	0.021	0.013	0.011	0.021	0.007	0.011	0.021	0.003	0.011
1.10	0.019	0.012	0.010	0.019	0.006	0.010	0.019	0.003	0.010
1.20	0.018	0.012	0.009	0.018	0.006	0.009	0.018	0.003	0.009
1.30	0.018	0.012	0.009	0.018	0.006	0.009	0.018	0.003	0.009

Table 6. Test Number 2 Reynolds Number Study Data Uncertainties

M_∞	$R \times 10^{-6}$	Model Body			Fin F15		
		ΔC_N	ΔC_{LM}	ΔC_A	ΔC_{NF4}	ΔC_{H4}	ΔC_{B4}
	0.3	0.160	1.072	0.124	0.089	0.053	0.062
	0.4	0.110	0.750	0.087	0.064	0.037	0.044
	0.7	0.069	0.439	0.051	0.041	0.021	0.027
	1.1	0.052	0.307	0.036	0.032	0.015	0.020
	1.3	0.044	0.244	0.028	0.029	0.012	0.017
	2.5	0.032	0.130	0.015	0.023	0.006	0.013
	3.5	0.029	0.105	0.012	0.022	0.005	0.012

Table 7. Listing of Part Numbers for the Tabulated Data of Test Number 1*

OFF	L	DEL1	DEL2	DEL3	DEL4	PHI	TRANSITION	R x 10 ⁻⁶	Q	β	Part Number																		
											M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞
											0.20	0.40	0.50	0.60	0.80	0.35	0.92	0.94	0.95	0.96	0.98	1.00	1.05	1.10	1.20	1.30			
B4VOF12	0	0	0	0	0	0	Unknown	2.3	Vary	0						(4)	5	(8)	9		10	(14)		15	(16)	17	18		
B4VOF13																(22)	24	(30)	31		32	(33)		34	(35)	(36)	(37)		
B4VOF16																(42)	43	(44)	45		46	(47)		48	(49)	(50)	(51)		
B4VOF22																(57)	58	(61)				(62)			(64)	(65)	(66)		
B4VOF23																(71)	72	(73)				(74)			(75)	(76)	(77)		
B4VOF21																(82)	83	(84)				(87)			(90)	(91)	(92)		
B4VOF35																(97)	98	(99)				(100)			(103)	(104)	(105)		
B4VOF34																(111)	112	(115)				(117)			(118)	(119)	(120)		
B4VOF33																(125)	126	(127)	128		129	(131)			(132)	(133)	(134)		
B4VOF32																(139)	140	(141)	142		143	(144)			(150)	(151)	(152)		
B4VOF31																(156)	157	(158)				(159)			(160)	(161)	(162)		
B4VOF11		↓	↓	↓	↓											(166)	167	(168)	169		170	(171)			(172)	(173)	(174)		
B2VOF0		OFF	OFF	OFF	OFF											(178)	179	(180)				(181)			(182)	(183)	(184)		
B5VOF0																(187)	188	(189)				(190)			(191)	(192)	(193)		
B4VOF0																(196)	197	(198)				(199)			(200)	(201)	(202)		
								Vary	23.5																				
								↓	12.0																				
								↓	9.0																				
								3.9	30.0																		207		
								2.0	↓	220				210										213		214			
								3.8	Vary					218										216	215				
								↓	223																				

No Tail Fin Data Presented

Table 8. Listing of Part Numbers for the Tabulated Data of Test Number 2*

CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	TRANSITION	R x 10 ⁻⁶	α	β	Part Number								
											M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞	M _∞
											0.59	0.80	0.85	0.92	0.98	1.10	1.20	1.29	1.30
B3WOF0	0	OFF	OFF	OFF	OFF	0	Free	0.3	Vary	0	5								
								0.4			7								
								0.7			8								
								1.1			9								
								1.3			10								
								1.8			11								
								2.6			12								
								3.5			14								
								4.3			15								
								4.9			16								
B3WOF15	0	0	0	0			Fixed	0.3			24								
								0.4			26								
								0.7			27								
								1.1			31								
								1.3			32								
						180		3.4			33								
								0.3			36								
								0.4			37								
								0.7			38								
								1.1			39								
								1.3			40								
								3.4			41								
						0	Free	0.4			47								
								0.7			48								
								1.1			49								
								3.4			50								
								2.5				(57)	58	(59)	(60)	(61)	(62)	63	
83WOF14												(69)	70	(71)	(72)	(73)	(74)		(75)
83WOF21												(80)	81	(82)	(83)	(84)	(85)		(86)
83WOF36												(91)	92	(93)	(94)	(95)	(96)		(98)
83WOF32												(105)	106	(107)	(108)	(109)	(110)		(111)
						Splitter Plate Offset Angle													
BOWOF14	—	—	—	—	—	0	Free	2.5	Vary	—	(123)	155	(162)	(171)	(130)	(144)		(137)	
						15							(163)						
						30					(124)	156	(164)	(172)	(131)	(145)		(138)	
						60					(125)	157	(166)	(173)	(132)	(146)		(139)	
						90					(126)	158	(167)	(174)	(133)	(147)		(140)	
						120					(127)	159	(168)	(175)	(134)	(148)		(141)	
						150					(128)	160	(169)	(176)	(135)	(149)		(142)	
						180					(129)	161	(170)	(177)		(150)		(143)	
BOWOF11						0					(184)	194	(201)	(272)	(279)	(287)		(294)	
						30					(185)	195	(202)	(273)	(280)	(288)		(295)	
						60					(186)	196	(203)	(274)	(281)	(289)		(296)	
						90					(187)	197	(204)	(275)	(282)	(290)		(297)	
						120					(188)	198	(269)	(276)	(283)	(291)		(298)	
						150					(189)	199	(270)	(277)	(284)	(292)		(299)	
						180							(285)						
											(190)	200	(271)	(278)	(286)	(293)		(300)	
BOWOF36						0					(208)	215	(223)	(230)	(240)	(247)		(257)	
						15												(258)	
						30					(209)	217	(224)	(231)	(241)	(248)		(259)	
						60					(210)	218	(225)	(234)	(242)	(249)		(260)	
						90					(211)	219	(226)	(235)	(243)	(250)		(261)	
						120					(212)	220	(227)	(236)	(244)	(251)		(262)	
						150					(213)	221	(228)	(237)	(245)	(252)		(263)	
						180					(214)	222	(229)	(238)	(246)	(253)		(264)	

* After Part Number 111, Only Splitter Plate Data Presented

Table 9. Listing of Part Numbers for the Tabulated Data of Test Number 3*

CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	TRANSITION	R x 10 ⁻⁶	α	β	Part Number			
											M _∞	M _∞	M _∞	M _∞
											2.36	2.86	3.95	4.63
BIWOF35	0	0	0	0	0	0	Fixed	3.0	Vary	0	(19)	(22)	(24)	(25)
↓		↓	↓	↓	↓	45		↓			(20)	(21)	(23)	(26)
↓			-20		-20	0					27	28	29	30
↓		20		20		45		2.5			31			
↓								3.0				32	33	34
BIWOF34								2.5			35			
↓								3.0				36	37	38
↓		0		0		0					39	40	41	42
BIWOF33		↓		↓		↓		↓			43	44	45	46
↓		20		20		45		2.5			47			
↓		↓		↓		↓		3.0				48	49	50
↓		0	0	0	0	0		2.9			(51)			
↓						45		↓			(52)			
↓						↓		3.2				(53)		
↓						0		↓				(54)		
↓						45		3.0					(55)	(58)
↓						0						(56)	(57)	
BIWOF34											(59)	(62)	(64)	(65)
↓						45					(60)	(61)	(63)	(66)
BIWIF34	15.42					↓					68	69	71	74
↓		↓		↓		0					(67)	(70)	(72)	(73)
↓		0	-20	0	-20	↓		↓			75	76	77	78
↓		20	↓	20	↓	45		2.5			79			
↓		↓		↓		↓		3.0				80	81	82
BIWIF0		OFF	OFF	OFF	OFF	↓					84	85	89	92
↓		↓	↓	↓	↓	0					(83)	(86)	(90)	(91)
BIWOF0	0	↓	↓	↓	↓	↓		↓			(93)	(94)	(95)	

* No Tail Fin Data Presented

Table 10. Listing of Part Numbers for the Tabulated Data of Test Number 4*

CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	TRANSITION	R x 10 ⁻⁶	α	β	Part Number			
											M _∞	M _∞	M _∞	M _∞
											2.36	2.86	3.95	4.63
B2WOF34	0	0	0	0	0	0	Fixed	3.0	Vary	0	(2)	(5)	(7)	(8)
↓						-90					3	4	6	9
B2WOF35						0					(12)	(11)	(13)	(10)
B2WOF33											(16)	(17)	(14)	(15)
B2WOF34			-20		-20						18	19	20	21
B2WOF35											22	23	24	25
B2WOF33												26		
↓		20	0	20	0	-90						28	29	30
↓								2.0			27			
B2WOF31								3.0			(34)	(35)	(36)	(37)
B2WOF32											(38)	(39)	(40)	(41)
B2WOF36	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	(43)	(42)	(44)	(45)

* No Tail Fin Data Presented

Table 11. Listing of Part Numbers for the Tabulated Data of Test Number 5*

CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	TRANSITION	R x 10 ⁻⁶	α	β	Part Number		
											M _∞	M _∞	M _∞
											1.50	1.80	2.16
BOWOF35	—	—	—	—	—	—	Fixed	1.8	Vary	—	(2)	(3)	
↓								2.5					(4)
BOWOF34								1.8			(5)	(6)	
↓								2.5					(7)
BOWOF31								1.8			(8)	(9)	
↓								2.5					(10)
BOWOF32								1.8			(11)	(12)	
↓								2.5					(13)
BOWOF36								1.8			(14)	(15)	
↓								2.5					(16)
BOWOF11								1.8			(17)	(18)	
↓								2.5					(19)
BOWOF15								1.8			(20)	(21)	
↓								2.5					(22)
BOWOF14								1.8			(23)	(24)	
↓								2.5					(25)
BOWOF13								1.8			(26)	(27)	
↓								2.5					(28)
BOWOF16								1.8			(29)	(30)	
↓								2.5					(31)

* Only Splitter Plate Data Presented

Table 12. Listing of Part Numbers for the Tabulated Data of Test Number 6

CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	TRANSITION	R x 10 ⁻⁶	α	β	Part Number					
											M _∞	M _∞	M _∞	M _∞	M _∞	M _∞
											0.85	0.92	0.97	1.01	1.05	1.10
B2WOF16	0	0	0	0	0	0	Fixed	1.7	Vary	0	1	2	3	4	5	6
B2WOF13											7	8	9	10	11	12
B2WOF12											13	14	15	16	17	18
									3	Vary	19					
									6		20					
									9		21					
									12		22					
									15		23					
									18		24					
B2W2F0	16.75	OFF	OFF	OFF	OFF				Vary	0	(25)	(26)	(27)	(28)	(29)	(30)
B2W1F0	15.40										(31)	(32)	(33)	(34)	(35)	(36)
B2W3F0	16.75										(37)	(38)	(39)	(40)	(41)	(42)
B2W3F12		0	0	0	0						(43)	(44)	(46)	(47)	(48)	(49)
B2W2F12											(57)	(50)	(51)	(52)	(53)	(54)
														56	55	
B2W1 F12	15.40										(58)	(59)	(60)	(61)	(62)	(63)
B2WOF13	0	30	0	30					0	Vary	(64)	(65)	(66)	(67)	(68)	(69)
B2WOF12													(71)	(72)	(73)	(74)
B2WOF16											(75)	(76)	(77)	(78)	(79)	(80)
		20		20							(81)	(82)	(83)	(85)	(86)	(87)
		10		10							(88)		(91)	(92)	(93)	(94)
B2WOF0		OFF	OFF	OFF	OFF				Vary	0	(95)	(96)	(97)	(98)	(99)	(100)
B2WOF13		10	0	10	0				0	Vary	(102)	(103)	(104)	(105)	(106)	(107)
		20		20							(108)	(109)	(110)	(111)	(112)	(113)
B2WOF12											(114)	(115)	(116)	(117)	(118)	(119)
		10		10							(120)	(121)	(122)	(123)	(124)	(125)
		0		0							(140)	(148)	(156)	(164)	(172)	(180)
									3		141	149	157	165	173	181
									6		(142)	(150)	(158)	(166)	(174)	(182)
									9		143	151	159	167	175	183
									12		(144)	(152)	(160)	(168)	(176)	(184)
									15		145	153	161	169	177	185
									18		(145)	(154)	(162)	(170)	(178)	(186)
									21		147	155	163	171	179	187

Table 13. Listing of Part Numbers for the Tabulated Data of Test Number 7

CONF	L	DEL1	DEL2	DEL3	DEL4	PHI	TRANSITION	$R \times 10^{-6}$	α	β	Part Number			
											M_∞	M_∞	M_∞	M_∞
											0.80	0.90	1.00	1.10
BIWOF23	0	0	0	0	0	0	Unknown	1.7	Vary	0	(2)	(5)	(8)	(10)
↓						45					4	6	9	11
BIWOF11						0					(28)	(30)	(33)	(37)
↓						45						34		
BIWOF34						0					29	32	35	36
↓						45					(39)	(41)	(44)	(45)
BIWOF14						0					40	42	43	46
↓						45					(47)	(50)	(51)	(54)
BIWOF15						0					48	49	52	53
↓						45					(55)	(58)	(59)	(62)
BIWOF13						0					56	57	60	61
↓						45					(63)	(66)	(67)	(70)
BIWOF31						0					64	65	68	69
↓						45					(71)	(74)	(75)	(79)
BIWOF0		OFF	OFF	OFF	OFF	0					72	73	76	77
BIWOF31		0	-10	0	-10						85	86	87	
BIWOF23											(90)	(91)	(92)	(93)
BIWOF11											(94)	(95)	(96)	(97)
BIWOF14											(98)	(99)	(100)	(101)
↓											(102)	(103)	(104)	(105)
BIWOF15											(106)	(107)	(108)	(109)
BIWOF13											(110)	(111)	(112)	(113)
BIWOF31											(114)	(115)	(116)	(117)
BIWOF34											(118)	(119)	(120)	(121)
BIWOF23											(122)	(123)	(124)	(125)
BIWOF11											(126)	(127)	(128)	(129)
↓											(130)	(131)	(132)	(133)
BIWOF14											(134)	(135)	(136)	(137)
BIWOF15											(138)	(139)	(140)	(141)
BIWOF23											(142)	(143)	(144)	(145)
BIWOF13											(146)	(147)	(148)	(149)
BIWOF31											(150)	(151)	(152)	(153)
BIWOF34											(154)	(155)	(156)	(157)
↓											(158)	(159)	(160)	(161)
BIWOF13											(162)	(163)	(164)	(165)
BIWOF15											(166)	(167)	(168)	(169)
											(170)	(171)	(172)	(173)
											(174)	(175)	(176)	(177)

NOMENCLATURE

A	Streamwise length of beveled portion of fin leading edge, in. (see Fig. 6)
ALPHA (α)	Model angle of attack, deg
AR	Fin aspect ratio, b^2/S_F
B	Streamwise length of beveled portion of fin trailing edge, in. (see Fig. 6)
BETA (β)	Model angle of sideslip, deg
b	Tail fin span, measured from the root chord to the tip, in. (see Fig. 6)
CA	Axial-force coefficient, measured axial force/ $q_\infty S$
CAB	Base axial-force coefficient, $(p_\infty - p_b)/q_\infty$
CAF	Forebody axial-force coefficient, $CA - CAB$
CB	Splitter plate tail fin root bending-moment coefficient, fin bending moment/ $q_\infty S_F b$
CB1, CB2, CB3, CB4	Root bending-moment coefficient of tail fins No. 1, 2, 3, and 4, respectively. fin bending moment/ $q_\infty S_F b$
CH	Splitter plate tail fin hinge-moment coefficient, hinge moment/ $q_\infty S_F C_R$
CH1, CH2, CH3, CH4	Hinge-moment coefficients of tail fins No. 1, 2, 3, and 4, respectively, fin hinge moment/ $q_\infty S_F C_R$
CLL	Rolling-moment coefficient, rolling moment/ $q_\infty S d$
CLM	Pitching-moment coefficient, pitching moment/ $q_\infty S d$ (moment reference point located on centerline at 50 percent of model body length)
CLN	Yawing-moment coefficient, yawing moment/ $q_\infty S d$
CN	Normal-force coefficient, normal force/ $q_\infty S$

CNF	Splitter plate tail fin normal-force coefficient. fin normal force/ $q_{\infty} S_F$
CNF1, CNF2, CNF3, CNF4	Normal-force coefficient of tail fins No. 1, 2, 3, and 4, respectively, fin normal force/ $q_{\infty} S_F$
CONF	Model configuration identification
C_R	Tail fin root chord, in. (see Fig. 6)
C_T	Tail fin tip chord, in. (see Fig. 6)
C_Y	Side-force coefficient, side force/ $q_{\infty} S$
d	Model body maximum diameter, in. (see Fig. 3)
DEL1, DEL2, DEL3, DEL4	Deflection of tail fins No. 1, 2, 3, and 4, respectively, deg
L	Distance between model nose and the intersection of the wing leading edge with the body (measured parallel to the body centerline), in.
MACH (M_{∞})	Nominal free-stream Mach number
PART	Data indexing number
PHI	Model roll angle, deg
POINT	Data indexing number per part number
p_b	Average static pressure at model base, psfa
p_{∞}	Free-stream static pressure, psfa
q_{∞}	Free-stream dynamic pressure, psf
R	Nominal Reynolds number per foot
S	Maximum body cross-sectional area, ft ²
S_F	Tail fin planform area, ft ² (see Fig. 6)
TEST	Test identification number
T_R	Tail fin root thickness, in. (see Fig. 6)

TRANSITION	Transition identification
X	Distance from fin root chord leading edge to fin hinge line, in. (see Fig. 6)
XCP	Missile body center-of-pressure location, CLM/CN
XCPF	Splitter plate fin longitudinal center-of-pressure location, CH/CNF
XCPF1, XCPF2 XCPF3, XCPF4	Longitudinal center-of-pressure location of tail fins No. 1, 2, 3, and 4, respectively, hinge moment/fin normal force
YCPF	Splitter plate fin lateral center-of-pressure location, CB/CNF
YCPF1, YCPF2 YCPF3, YCPF4	Lateral center-of-pressure location of tail fins No. 1, 2, 3, and 4, respectively, root bending moment/fin normal force
Λ	Tail fin leading-edge sweep angle (see Fig. 6)
λ	Tail fin taper ratio, C_T/C_R